



SREE SANKARACHARYA UNIVERSITY OF
SANSKRIT, KALADY

Project Mode PG Programme

**Multidisciplinary Dual Main Master's in Disaster
Management and Mitigation**

(Associating Disciplines: Geography, Psychology, Sociology
and Social Work)

Sanctioned by
Ministry of Higher Education, Government of Kerala

Programme Structure and Syllabi

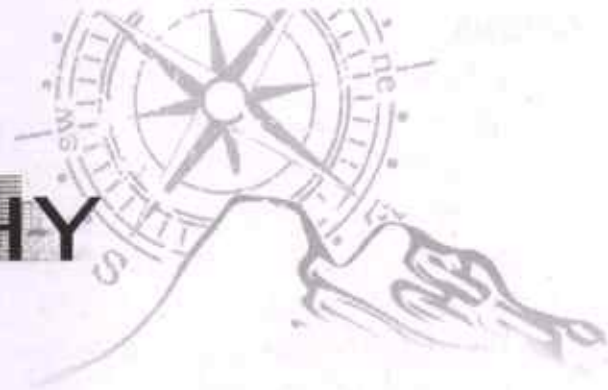
Programme Highlights

- A Multidisciplinary Innovative PG Programme
- Self-Sustain Mode
- Fast emerging academic field with Cross Disciplinary Knowledge
- Minimum Credit requirement is 92
- Intake – 40 Seats
- Dual Main Programme ensuring equivalency with other Universities
- Awarding Four Separate Degrees in a Single Programme
 - M.Sc. In Geography and DMM
 - M.Sc. In Psychology and DMM
 - M.A In Sociology and DMM
 - Masters in Social Work and DMM
- Fieldwork in all semesters for ground experience
- Internships



SRI SANKARACHARYA UNIVERSITY OF SANSKRIT, KALAMANGAL, KERALA

DEPARTMENT OF GEOGRAPHY



SYLLABI OF MASTER OF SCIENCE (MSc) IN GEOGRAPHY AND DISASTER MANAGEMENT AND MITIGATION – 2023

(Outcome Based Teaching, Learning and Evaluation – OBLTE)

February 2023

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7. Environmental Geography
8. Disaster and Society
9. Geo- Spatial Technologies for DMM
10. Remote Sensing
11. Geographic Information Systems
12. Fieldwork (Community)
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Preface

This Multidisciplinary Dual Main Masters Programme in Geography and DMM hosted in the Department of Geography at SSUS is designed to reflect the knowledge of theories, concepts, techniques and technologies in Geography as well as in DMM. Geography is the study of physical environments and human habitats. It deals with people and places. It covers issues such as global warming and climate change, food and water resources, management of ecosystems, human modifications of land, regional economic disparities, and urban infrastructure from various theoretical positions. Both a physical and a social science, it provides a unique opportunity to obtain a broad exposure to modes of analyzing the many ecological and cultural problems of contemporary society. This Multidisciplinary Dual Main Masters Programme in Geography and DMM is designed in such a way that by the end of the two years the students will be able to attain skill and comprehensive knowledge of scientific, social and technical aspects to conceptualize and address the disaster situation.

The department is based in the Faculty of Science, Technology and Education and offers degrees at the Masters (M.Sc), and Research (M.Phil & Ph.D.) levels.

OBTLE Abbreviations

OBTLE	-	Outcome Based Teaching and Learning Education
CL	-	Cognitive Level
Re	-	Remember
Un	-	Understand
Ap	-	Apply
An	-	Analyse
Ev	-	Evaluate
Cr	-	Create
KC	-	Knowledge Category
Fa	-	Factual
Co	-	Conceptual
Pr	-	Procedural
Me	-	Meta Cognitive

Programme Outcomes (POs) of SSUS for PG Programmes

PO1. Critical Thinking: Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.

PO2. Communication: Listen, read, comprehend, speak and write clearly and effectively in person and through electronic media in English/regional language/language of the discipline and exhibit sound domain knowledge including academic concepts and terminologies.

PO3. Self-directed and Life-long Learning: Engage in independent and lifelong learning in the broadest context of socio-technological changes.

PO4. Ethics: Understand different value systems including one's own, as also the moral dimensions of actions, and accept responsibility for it.

MSc in Geography and Disaster Management and Mitigation (DMM)

Programme Specific Outcomes (PSOs)

PSO 1. Understand the natural and social aspects concerning disasters and disaster management mechanisms. (PO3)

PSO 2. Analyse critically social and ecological vulnerabilities, hazards and resilience. (PO1)

PSO 3. Apply systems thinking and critical thinking skills to analyze problems and potential solutions in socio-economic-ecological systems at the human-environment interface. (PO1)

PSO 4. Critically analyse and apply existing global and national level frameworks and policies in disaster risk reduction and mitigation. (PO1)

PSO 5. Demonstrate competence in using technology for disaster management and mitigation. (PO2)

PSO6. Work effectively in interdisciplinary and multicultural real-world contexts to combine theory and practice in responding to local to global issues for humans and non-humans. (PO4)

PSO 7. Engage and develop participatory community-based risk reduction plan thereby empowering the communities. (PO4)

Programme Structure

(Total Minimum Credits: 92)

Semester I

Sl. No.	Course	Discipline	Core / Elective	Credits	No. of Students	Hours/ Week
1.	Understanding Disasters and Disaster Management	DMM	Core	4	40	4
2.	Environmental Geography	Geography	Core	4	10+15=25	4
3.	Disaster and Society	DMM	Core	4	40	4
4.	1. Geo- Spatial Technologies for DMM 2. Remote Sensing*	Geography	Cross Disciplinary Core	4	30 + 10	4
3.	Geographic Information Systems	Geography	Core	4	10+15=25	4
4.	Fieldwork (Community)	DMM	Core	4	40	10 days (12hrs x 10 = 120hrs)
	Total Credits			24		

Semester II

Sl. No.	Course	Discipline	Core/ Elective	Credits	No. of Students	Hours / Week
1.	Disaster Governance	DMM	Core	4	40	4
2.	Analytical Geomorphology	Geography	Core	4	10+15=25	4
3.	Community Based Risk Reduction	Social Work	Cross Disciplinary Core	4	40	4
4.	Multi-disciplinary Elective	Sanskrit	Elective	4	40	4
5.	Fieldwork (PRA Camp)	DMM	Core	4	40	10 days (12hrs x 10 = 120hrs)
6.	Sociology of Change, Development and Sustainability	Sociology	Cross Disciplinary Core	4	40	4
	Total Credits			24		

Semester III

Sl. No.	Course	Discipline	Core/ Elective	Credits	No. of Students	Hours / Week
1.	Methodologies in Disaster Management Research	DMM	Core	4	40	4
2.	Environment of Kerala	Geography	Core	4	10+15=25	4
3.	Stress and Coping	Psychology	Cross Disciplinary Core	4	40	4
4.	Multi-disciplinary Elective	Any Department	Elective	4	40	4
5.	Fieldwork	Geography	Core	4	10+15=25	10 days (12hrs x 10 = 120hrs)
6.	Psychological First Aid	DMM	Skill Course	1	40	15hrs / Sem
7.	Life Saving Skills	DMM	Skill Course	1	40	15 hrs/ Sem
	Total Credits			22		

Semester IV

Sl. No.	Course	Discipline	Core / Elective	Credits	No. of Students	Hours/Week
1.	Project Planning and Administration for Disaster Risk Reduction	DMM	Core	4	40	4
2.	1. Disaster Finance and Humanitarian aid 2. Disaster Communication 3. Disaster and Geopolitics 4. Public Health and Mental Health	DMM	Elective	4	40	4
3.	Climatology and Climate Change	Geography	Core	4	10+15=25	4
4.	Dissertation	DMM	Core	6	40	6
5.	Internship	DMM	Core	4	40	4
	Total Credits			22		

* Geo- Spatial Technologies for DMM for the students from Psychology, Sociology and Social Work and Remote Sensing for Geography students.

Programme Syllabi

Semester I

Core Course: UNDERSTANDING DISASTERS & DISASTER MANAGEMENT

Course Outcomes:

- Understand the basic concepts of disaster and characteristics of disasters
- Recognize the importance of environment for understanding disasters and disaster management
- Evaluate various physical elements and forces acting on the surface of the earth.
- Examine various process and drivers behind the occurrence of disasters
- Analyse the impacts of disasters in various sectors in different context
- Develop skills in identification and preparation for vulnerability and risk mapping

Module 1: Basic Concepts of Disaster and Disaster Management

- 1.1 Understanding and defining disaster: Acts of God, Acts of Nature, Disasters as joint effects of nature and society, Injustice and human vulnerability to disasters.
- 1.2 Disasters in the context of Physical and Environmental Vulnerability
- 1.3 Classification of Disasters; Disaster cycle
- 1.4 Need for disaster management in today's world.
 - 1.4.1 Disaster management in India
 - 1.4.2 Disaster management in Kerala
- 1.5 Basic steps in Disaster Management and Mitigation

Essential Reading

Quarantelli, E L (1998) *what is a Disaster? Perspectives on the Question*. United Kingdom, Routledge.

Perry, Ronald W., and Quarantelli, Enrico Louis (2005) *What is a Disaster? New Answers to Old Questions*. United Kingdom, Xlibris.

Hewitt K. (2017) *Regions of Risk: A Geographical Introduction to Disasters*. Taylor and Francis. ISBN: 9781317894162, 1317894162

Jones, L. (2019). *The big ones: How natural disasters have shaped us (and what we can do about them)*. Anchor.

Bankoff B (2023) Time is of the essence: Disasters, Vulnerability and History. *International Journal of Mass Emergencies & Disasters*. Volume 22, Issue 3.
<https://doi.org/10.1177/028072700402200303>

Vasilescu L, A Khan and H Khan (2008) *DISASTER MANAGEMENT CYCLE – A THEORETICAL APPROACH*. Editura Universitaria Craiova. (Free down load:
<https://www.ceeol.com/search/article-detail?id=147294>)

Collins, A.E. (2009). *Disaster and Development* (1st ed.). Routledge.
<https://doi.org/10.4324/9780203879238>

Taori, K. (2005). *Disaster Management Through Panchayati Raj*. India: Concept Publishing Company.

Joice K. Joseph, Dev Anand, P. Prajeesh, Anand Zacharias, Anu George Varghese, A.P. Pradeepkumar, K.R. Baiju, (2020) Community resilience mechanism in an unexpected extreme weather event: An analysis of the Kerala floods of 2018, India, *International Journal of Disaster Risk Reduction*, Volume 49, Science Direct. ISSN 2212-4209, <https://doi.org/10.1016/j.ijdrr.2020.101741>.

Module 2: Natural Hazards and physical environment

- 2.1 Defining natural phenomena and natural hazards - physical forces acting on the surface of the earth (endogenic and exogenic forces)
- 2.2 Ecosystem and its components - Ecosystem services - Biodiversity
- 2.3 Hazards in different geographical settings: in mountains and coastal environment
- 2.4 Contextualizing climate change, extreme events and natural hazards

Essential Reading

Scheidegger, A. E. (2012). *Theoretical Geomorphology*. Germany: Springer Berlin Heidelberg.

Meli, P., Vieli, L., Spirito, F., Reyes-Riveros, R., Gonzalez-Suhr, C., & Altamirano, A. (2023). The importance of considering human well-being to understand social preferences of ecosystem services. *Journal for Nature Conservation*, 126344.

Takacs, V., & O'Brien, C. D. (2023). Trends and gaps in biodiversity and ecosystem services research: A text mining approach. *Ambio*, 52(1), 81-94.

Melaku, A., Ivars, J. P., & Sahle, M. (2023). The state-of-the-art and future research directions on sacred forests and ecosystem services. *Environmental Management*, 1-14.

Sandhu, H., Zhang, W., Meinzen-Dick, R., ElDidi, H., Perveen, S., Sharma, J., ... & Priyadarshini, P. (2023). Valuing ecosystem services provided by land commons in India: implications for research and policy. *Environmental Research Letters*.

Zimmermann, M., & Keller, M. (2015). International frameworks for disaster risk reduction: Useful guidance for sustainable mountain development? *Mountain Research and Development*, 35(2), 195-202.

Coratza, P., & De Waele, J. (2012). Geomorphosites and natural hazards: teaching the importance of geomorphology in society. *Geoheritage*, 4, 195-203.

Hewitt, K. (2004). Geomorphic hazards in mountain environments. *Mountain geomorphology*, 187-218.

Klein, N. (2015). *This changes everything: Capitalism vs. the climate*. Simon and Schuster.

Douglas, K. (2021). The nature fix. *New Scientist*, 249(3327), 36-40.

Pelling M. 2010. *Adaptations to Climate Change: From Resilience to Transformation*. Taylor & Francis. ISBN: 9781134022014, 1134022018

Srinivas, H., & Nakagawa, Y. (2008). Environmental implications for disaster preparedness: lessons learnt from the Indian Ocean Tsunami. *Journal of environmental management*, 89(1), 4-13.

Module 3: Natural process and disasters

- 3.1 Spatial distribution of disasters- Drivers and causes, salient features - History of major disaster events – Global and Local
- 3.2 Geological disasters (Earthquake, landslide, tsunami)
- 3.3 Climatological disasters (flood, drought, cyclones; lightning)
- 3.4 Hydrological disasters (Flood, GLOF, avalanche)
- 3.5 Major natural disasters: Case studies

Essential Reading

Hewitt K. 2017. *Regions of Risk: A Geographical Introduction to Disasters*. Taylor and Francis. ISBN: 9781317894162, 1317894162

Rodriguez H, Joseph E. Trainor, William Donner (2017) *Handbook of Disaster Research*. Springer. ISBN: 9783319632544, 331963254X

Jones LM. *The Big Ones: How Natural Disasters Have Shaped Us (and what We Can Do about Them)*. Doubleday Publishers. ISBN: 9780385542708, 0385542704

Scott, R., MacDonald, G., Horn, W., Bolt, B. (1977). *Geological Hazards: Earthquakes - Tsunamis - Volcanoes - Avalanches - Landslides - Floods*. Germany: Springer New York.

Wenzel F and J Zschau (2013). *Early Warning for Geological Disasters: Scientific Methods and Current Practice*. Germany: Springer Berlin Heidelberg

Okuyama, Y., & Sahin, S. (2009). Impact estimation of disasters: a global aggregate for 1960 to 2007. *World Bank Policy research working paper*, (4963).

Thomas, V., Albert, J. R. G., & Hepburn, C. (2014). Contributors to the frequency of intense climate disasters in Asia-Pacific countries. *Climatic Change*, 126, 381-398.

Pfister C and C Mauch (Ed) (2009) *Natural Disasters, Cultural Responses: Case Studies Toward a Global Environmental History*. United Kingdom: Lexington Books.

Module 4: Human induced disasters

- 4.1 Human-induced disasters: Causative factors (Environmental degradation enhancing pre-existing environmental vulnerabilities)
- 4.2 Technological/human-made disasters (Industrial, nuclear, transportation, dam failure, stampede, terrorism, conflicts: war, cyber-attacks)
- 4.3 Chemical disasters and biological disasters; (chemical leaks and explosions, epidemic/pandemic, pest attacks/locusts/insect infestations)
- 4.4 Human-induced disasters: Case studies

Essential Reading

- Wilson, E. O. (2017). *Half-Earth: Our Planet's Fight for Life*. United Kingdom: WW Norton.
- Cutter, S. L. (1996). Vulnerability to environmental hazards. *Progress in human geography*, 20(4), 529-539. (Free download)
- Turner, Alan Keith (2018). "Social and environmental impacts of landslides." *Innovative Infrastructure Solutions* 3. 1-25.
- Sharma, J., & Ravindranath, N. H. (2019). Applying IPCC 2014 framework for hazard-specific vulnerability assessment under climate change. *Environmental Research Communications*, 1(5), 051004.
- Dave R K (2018) *Disaster Management in India: Challenges and Strategies*. Prowess Publishing.
- Perry, John. *Nuclear Weapons and the Environment: An Ecological Case for Non-proliferation*. Lexington Books, 2021.
- Biswas, Asit K. (2004). "Dams: cornucopia or disaster?" *International Journal of Water Resources Development* 20.1 3-14.
- Salazar, Mary K., and Betty Kelman. (2002). "Planning for biological disasters: Occupational Health Nurses as "First Responders"." *AAOHN Journal* 50.4. 174-181.
- Kumar, Jitendra. (2020). "Biological disaster management." *International Journal of Technical Research & Science* 5.7. 5-10.
- Kondratyev, Kirill Ya, Alexei A. Grigoryev, and Costas A. Varotsos. (2002). *Environmental disasters: Anthropogenic and natural*. London, England: Springer.
- Sriramachari, S. (2004). The Bhopal gas tragedy: An environmental disaster. *Current Science*, 86(7), 905-920.
- Belgel, A., & Berren, M. R. (1985). Human-induced disasters. *Psychiatric Annals*, 15(3), 143-150.
- Nibanupudi, H. K., Gupta, A. K., & Rawat, P. K. (2015). Mitigating climatic and human induced disaster risks through ecosystem resilience: Harmonizing built and natural environments in the HKH region. *Mountain hazards and disaster risk reduction*, 139-157.
- Ghassemi, F., Jakeman, A. J., & Nix, H. A. (1995). *Salinisation of land and water resources: human causes, extent, management and case studies*. CAB international.
- Ajin, R.S., Nandakumar, D., Rajaneesh, A. et al. (2022). The tale of three landslides in the Western Ghats, India: lessons to be learnt. *Geoenvirom Disasters* 9, 16
<https://doi.org/10.1186/s40677-022-00218-1>

Module 5: Activities and Processes in Disaster Management and Mitigation

- 5.1 Disaster Preparedness – risk assessment, emergency plan creation, emergency response teams
- 5.2 Response – saving lives, reducing health impacts, normalising post-disaster situation
- 5.3 Recovery – rebuild infrastructure, provide assistance to the affected
- 5.4 Mitigation – actions to reduce future disasters

Essential Reading

Pelling M. (2010). *Adaptations to Climate Change: From Resilience to Transformation*. Taylor & Francis. ISBN: 9781134022014, 1134022018

UN (2022). *United Nations Global Assessment Report on Disaster Risk Reduction – Our World at Risk: Transforming Governance for a Resilient Future*. Downloadable at: www.undrr.org/GAR2022

COLLINS, L. R. (2023). *DISASTER MANAGEMENT AND PREPAREDNESS*. Taylor & Francis. CRC Press.

Rubin, O., Dahlberg, R. (2017). *A Dictionary of Disaster Management*. United Kingdom: OUP Oxford.

Kiefer, J. J., Jerolleman, A. (2012). *Natural Hazard Mitigation*. United Kingdom: Taylor & Francis.

Suggested Reading

André van Amstel, Md. Nazrul Islam (Ed) (2021). *India: Climate Change Impacts, Mitigation and Adaptation in Developing Countries*. Springer International Publishing.

DHAMEJA, A., MEDURY, U., SAHNI, P. (2018). *DISASTER MITIGATION: EXPERIENCES AND REFLECTIONS*. India: PHI Learning.

Maskrey, A. (1989). *Disaster Mitigation: A Community Based Approach*. United Kingdom: Oxfam.

Esteban M, T Shibayama and H Takagi (Ed) (2015). *Handbook of Coastal Disaster Mitigation for Engineers and Planners*. Netherlands: Elsevier Science.

Aaltola, M. (2012). *Theoretical Departures to Disasters and Emergencies*. In: Attinà, F. (eds) *The Politics and Policies of Relief, Aid and Reconstruction*. Palgrave Macmillan, London. https://doi.org/10.1057/9781137026736_4 (Free download)

Quarantelli, E. L. (1989). *Conceptualizing disasters from a sociological perspective*. *International Journal of Mass Emergencies & Disasters*, 7(3), 243-251.

Wiest, R. E., Mocellin, J. S., & Motsisi, D. T. (1994). *The needs of women in disasters and emergencies* (pp. 12-6). Winnipeg, MB, Canada: Disaster Research Institute, University of Manitoba.

Britton, N. R. (1986). *Developing an understanding of disaster*. *The Australian and New Zealand Journal of Sociology*, 22(2), 254-271.

Nan, Y., Li, Y., Liu, K., Dai, B., Lai, J., & Zhang, Y. (2023). *Global earthquake disaster and emergency response in 2021*. In *Advances In Civil Engineering: Structural Seismic Resistance, Monitoring and Detection* (pp. 606-611). CRC Press.

Roy, P., Pal, S. C., Chakraborty, R., Chowdhuri, I., Saha, A., & Shit, M. (2023). *Effects of climate change and sea-level rise on coastal habitat: Vulnerability assessment, adaptation strategies and policy recommendations*. *Journal of Environmental Management*, 330, 117187.

Kumar, S., David Raj, A., Kalambukattu, J. G., & Chatterjee, U. (2023). *Climate Change Impact on Land Degradation and Soil Erosion in Hilly and Mountainous Landscape: Sustainability*

Issues and Adaptation Strategies. In *Ecological Footprints of Climate Change: Adaptive Approaches and Sustainability* (pp. 119-155). Cham: Springer International Publishing.

Kamal, M., Zahid, D., & Malak, M. A. (2023). WHY IS WOMEN'S LEADERSHIP IMPORTANT FOR ENHANCING DISASTER RESILIENCE TO NATURAL PERTURBATIONS. *Coastal Disaster Risk Management in Bangladesh: Vulnerability and Resilience*.

Ghosh, A., Sen, A., & Frietsch, M. (2023). "What is a 'very severe cyclone' please"? Uncovering knowledge and communication gaps in climate resilience realities. *International Journal of Disaster Risk Reduction*, 86, 103499.

Anwana, E. O., & Owojori, O. M. (2023). Analysis of Flooding Vulnerability in Informal Settlements Literature: Mapping and Research Agenda. *Social Sciences*, 12(1), 40.

Mikulecký, P., Punčochářová, A., Babič, F., Bureš, V., Čech, P., Husáková, M., ... & Zanker, M. (2023). Dealing with risks associated with tsunamis using indigenous knowledge approaches. *International Journal of Disaster Risk Reduction*, 103534.

Carmona, R., Reed, G., Thorsell, S., MacDonald, J. P., Dorrough, D. S., Rai, T. B., & Sanago, G. (2023). A New Partnership with Indigenous Peoples? An Analysis of the Intergovernmental Panel on Climate Change's Sixth Assessment Report. *researchsquare.com* (Free download)

Al-Husain, R. (2023). Epidemiological disaster management: Literature survey and analysis. *International Journal of Innovative Research and Scientific Studies*, 6(1), 49-63.

Botzen, W. W., Deschenes, O., & Sanders, M. (2019). The economic impacts of natural disasters: A review of models and empirical studies. *Review of Environmental Economics and Policy*.

Guha-Sapir, D., Santos, I., & Borde, A. (Eds.). (2013). *The economic impacts of natural disasters*. Oxford University Press.

Other Resources from WWW:

Ramsar Convention. (2017). Wetlands: A natural safeguard against disasters. <https://www.ramsar.org/document/resolution-xii13-wetlands-and-disaster-risk-reduction>

United Nations Office for Disaster Risk Reduction. (n.d.). Disaster risk reduction & disaster risk management. Sendai Framework: <https://www.undrr.org/implementing-sendai-framework>

World Meteorological Organization. (2021). WMO atlas of mortality and economic losses from weather, climate and water extremes. <https://public.wmo.int/en>

World Bank: <https://www.worldbank.org/en/topic/disasterriskmanagement>

CORE COURSE: ENVIRONMENTAL GEOGRAPHY

Course Learning Outcomes:

CO1. Understand the environment from different perspectives

CO2. Examine the geographical explanations for biological diversity of the world

CO3. Develop an environment perceptive when approaching complex development issues.

CO4. Evaluate the vulnerability of ecosystem services

CO5. Demonstrate methodological procedure for conducting Environment Impact Assessment

CO6. Appreciate and recognize the complexity and value of ecosystem

Course Content:

Module 1

Concept of Environment, Major elements, functioning of environmental systems, Biotic and Abiotic elements - Ecosystem: Structure, Function, Process and Energy flow- Bio Geo Chemical cycles- Trophic levels - Ecosystem stability.

Module 2

Different Approaches to Environmental Geography-Earth Science System-Land Science System- Ecological Approaches (Natural, Political and Urban)-Environment History-Landscape studies (Culture and Regional Studies)

Module 3

Linking People and Ecosystem, Major earth's ecosystems, Causes and types of ecosystem degradation, Managing Ecosystem health - Vulnerability, risk and resilience to Environmental Change- Biodiversity: Biodiversity uses, threats to biodiversity, biodiversity conservation.

Module 4

Global Environmental issues, Environmental programmes and policies – Global, National and Local levels, Environmental Laws in India- Environmental Impact assessment (EIA) - Environmental Management Planning (EMP) - Environmental Performance Assessment (EPA)

Essential Readings:

- Anderson J.M. (1981): Ecology for Environmental Science: Biosphere, Ecosystems and Man, Arnold, London.
- Balakrishnan, M., 1998. Environmental Problems and Prospects in India, in Das, R.C., et. al. Oxford & IBH Pub., New Delhi.
- Canter Chary, L. W. 1996: Environmental Impact Assessment, 2nd edition, McGraw Hill, New York
- Chichester: Marsh, W.M. and Grossa, J.M. (1996): Environmental Geography: Science, Landuse and Earth Systems, John Wiley & Sons.
- Das, M.C. 1993, Fundamentals of Ecology, Tata Mc Graw Hill, New Delhi.
- Farmer, A. 1997. Managing Environmental Pollution, Routledge, London
- Gilpin, A. 1996 : Dictionary of Environment and Sustainable Development, John Wiley and Sons Ltd.,
- Goudie, Andrew (1984) : The Nature of the Environment, Oxford Katerpring Co. Ltd.
- Huggett, R.J. 2002. Fundamentals of Biogeography, Routledge, London & New York.
- Maryk, Theodore .1996. Major Environmental Issues Facing 21st Century, Prentice Hall.
- Middleton N.1995 : The Global Casino: An .Introduction to Environmental Issues, John Wiley and Sons Inc., New York
- Nobel and Wright (1996) : Environmental Science, Prentice Hall, New York.
- Odum, E.P. (1971) : Fundamental of Ecology, W.B. Sanders, Philadelphia.
- Roberts, N. 1994. The Changing Global Environment, 3rd edition, Blackwell Pub. Co., London.
- Sharma, P.D. 1975. Ecology and Environment, Rastogi Publication, Meerut.
- Singh, R.B. (ed.) (1989) : Environmental Geography, Heritage, New Delhi.
- Singh, R.B. and Misra, S. 1996: Environmental Laws in .India: .Issues and Responses, Rawat Pub., New Delhi:
- Slaymaker, A. & Spencer T. 1998: Physical Geography & Global Environmental Change, Longman, UK.
- Speth, I.G.2005. Global Environmental Challenges – Transitions to a Sustainable World, Orient Longman, New Delhi
- Strahler, A.H. and Strahler A.N. (1977) : Geography and Mans Environment, JohnWiley, New York.
- Strahler, A.N. and Strahler, A.H. (1973) : Environmental Geosciences : Interaction between natural systems and Man, John Wiley and Sons, New York.
- William, M.M. and John, G. (1996) : Environmental Geography - Science, Landuse and Earth System, John Wiley and Sons, New York.

Core Course: DISASTER & SOCIETY

Course Learning Outcomes:

- CO1:** *Understand Sociology as a scientific discipline and its theoretical approaches*
- CO2:** *Understand the social structure and transformations of Indian and Kerala society*
- CO3:** *Understand the framing of disasters through the lens of Sociology*
- CO4:** *Appraise how social structures influence disaster experience and think critically about how social dynamics shape the ways people and communities prepare for, face and recover from disaster*

Module:1 The Study of Human Society

- 1.1. Emergence of Sociology as a Scientific Discipline; Nature & Scope
- 1.2. Sociological Perspective : Common Sense Vs Sociological Imagination; Units of Study, Methodological Orientations: Positivism, Humanism, Materialism
- 1.3. Theoretical Approaches - Classical Tradition, Structuralism, Functionalism, Structural-Functionalism, Conflict Perspectives, Critical Theory, Social Constructionism, Post Structural, Postmodern and Neo-Social Perspectives

Essential Reading

- Bottomore, T. B. (2010). *Sociology: A Guide to Problems and Literature*. United Kingdom: Routledge.
- Davis, K. (1963). *Human Society*. United Kingdom: Macmillan.
- Giddens, A., Sutton, P. W. (2017). *Sociology*. Germany: Wiley.
- Inkeles, A. (1964). *What is Sociology? An Introduction to the Discipline and Profession*. United States: Prentice-Hall.
- Oommen, T.K. & Venugopal C.N. (2018). *Sociology*. Delhi : Eastern Book Company.
- Mills, C. W. (2022). *The Sociological Imagination*. India: Aakar.
- Timasheff, N. S. (1963). *Sociological Theory: Its Nature and Growth*. United States: Random House.

Module: 2 Social Structure, Process and Transformations

- 2.1. Basic Concepts : Society, Community, Association, Socialisation, Institution, Culture, Social groups, Social Stratification and Mobility, Social System, Social Structure, Social Problems and Social Change
- 2.2. Indian Context : Family and Kinship; Caste and Class; Economy and Society; Polity and Society; Education and Society; Urban, Peasant and Tribal Communities; Unity in Diversity
- 2.3. Kerala Context : Genealogy of Structural Changes in Kerala Society; Caste, Class and Religion; Family, Marriage and Gender; The Unique Kerala

Essential Reading

- A.M. Shah. (1996). Social Structure and Change (vol. 4 & 5). New Delhi: Sage
- Beteille.A. (2011).Caste, Class and Power.New Delhi: Oxford
- M.N. Srinivas. 1997. Caste: its twentieth century avatar. New Delhi: Penguin
- Oommen, T.K. & Venugopal C.N. (2018). Sociology. Delhi : Eastern Book Company.
- Elamkulam P.N. Kunjan Pillai. 1970. Studies in Kerala History. Kottayam: National Book Stall.
- Rathi Ramachandran. et.at. 2005.History of Medieval Kerala. New Delhi: Pragati Publications.
- Raja Jayaraman. 1981. Caste and Class: dynamics of inequalities in Indian society. Delhi: Hindustan Publishing

Module:3 Sociology of Disaster

- 3.1. Disaster and Society - Disasters as a Social Phenomenon and Significance of Sociological Approach; The Hazards-Disaster Tradition; Human Ecology, Vulnerability, and Resilience; The Crisis Approach; Culture, Knowledge and Religious Interpretations of Disaster
- 3.2. Framing Disasters: Constructionist Theories - Weberian Political Sociology; Ulrich Beck - Risk Society; Anthony Giddens - The Consequences of Modernity;
- 3.3. The Social Science Disaster Paradigm; Environment, Development and Sustainability; Studying Future Disasters and Crises
- 3.4. Resilience and Disasters : Case Studies

Essential Reading

- Donner, W. R. (2007). The Political Ecology of Disaster: An Analysis of Factors Influencing U.S. Tornado Fatalities and Injuries, 1998-2000. *Demography*, 44(3), 669-685.
<http://www.jstor.org/stable/30053107>
- Handbook of Disaster Research. (2017). Germany: Springer International Publishing. (Ch. 1,2, & 4)
- Schutt, R.S. (2010). A Sociological Perspective on Disasters. In *Rebuilding Sustainable Communities for Children and Their Families After Disasters: A Global Survey*. (2010). United Kingdom: Cambridge Scholars.
- Stallings, R. A. (2002). Weberian Political Sociology and Sociological Disaster Studies. *Sociological Forum*, 17(2), 281-305. <http://www.jstor.org/stable/3070327>

Module: 4 Disaster and Vulnerability Profile

- 4.1. Vulnerability Profile : Models of Vulnerabilities, Global to Local; Power, Human Rights and Disaster; The Political Ecology of Disaster Vulnerability
- 4.2. The Cultural Turn in Disaster: Culture and Social Construction, Culture as a Source of Resilience, Culture as a Source of Vulnerability
- 4.3. Race, Class, Religious affiliation, Caste, Ethnicity, Gender, Sexuality, Children, Youth and Elderly, Disability and Disaster Vulnerability
- 4.4. Social Capital in Disaster Research; Intersectionality Approach

Essential Reading

Baruah, M. (2023) *Slow disaster: Political ecology of hazards and everyday life in the Brahmaputra Valley, Assam*. London: Routledge, Taylor & Francis Group.

Cutter S, Boruff B, Shirley W (2003) Social vulnerability to environmental hazards. *Soc Sci Q* 84:242–261. <https://doi.org/10.1111/1540-6237.8402002>

Handbook of Disaster Research. (2017). Germany: Springer International Publishing. (Ch.6, 10–14)

The Routledge Handbook of Disaster Risk Reduction Including Climate Change Adaptation. (2020). United Kingdom: Taylor & Francis Group. (Ch.6, 13)

Handbook of Hazards and Disaster Risk Reduction. (2012). United Kingdom: Taylor & Francis. (Ch.3–4, 6, 8–10, 34–38)

Disaster Risk Reduction : Community Resilience and Responses. (2018). Germany : Palgrave Macmillan US

Suggested Reading

Alexander, D. A. (2005). An interpretation of disaster in terms of changes in culture, society and international relations. In R. W. Perry & E. L. Quarantelli (Eds.), *What is a disaster: New answers to old questions* (pp. 25–38). Philadelphia: Xlibris Publishers.

Amundsen, H. (2012). Illusions of resilience? *Ecology and Society*, 17(4), 1–19

Barton, A. H. (1969). *Communities in disaster*. New York, NY, USA: Doubleday.

Barton, A. H. (1989). Taxonomies of disaster and macrosocial theory. In G. A. Kreps (Ed.), *Social structure and disaster* (pp. 346–350). Newark, DE, USA: University of Delaware Press

Barton, A. H. (2005). Disaster and collective stress. In R. W. Perry & E. L. Quarantelli (Eds.), *What is a disaster: New answers to old questions* (pp. 125–152). Philadelphia: Xlibris Publishers.

Bates, F. L., & Peacock, W. G. (1993). *Living conditions, disasters and development*. Athens, GA, USA: University of Georgia Press

Bates, F. L., & Pelanda, C. (1994). An ecological approach to disasters. In R. Dynes & K. Tierney (Eds.), *Disasters, collective behavior and social organization* (pp. 145–159). Newark, DE, USA: University of Delaware Press

Berkes, F., & Ross, H. (2013). Community resilience. *Society and Natural Resources*, 26(1), 5–20.

Birkmann, J., Cardona, O., Carreno, M., Barbat, A., Pelling, M., Schneiderbauer, S., et al. (2014). Theoretical and conceptual framework for the assessment of vulnerability to natural hazards and climate change in Europe. In J. Birkmann, S. Kienberger, & D. Alexander (Eds.), *Assessment of vulnerability to natural hazards* (pp. 1–20). London: Elsevier.

Boin, A. (2005). From crisis to disaster: Towards an integrative perspective. In R. W. Perry & E. L. Quarantelli (Eds.), *What is a disaster: New answers to old questions* (pp. 153–172). Philadelphia: Xlibris Publishers.

Boin, A., Comfort, L., & Demchak, C. (2010). The rise of resilience. In L. Comfort, A. Boin, & C. Demchak (Eds.), *Designing resilience* (pp. 1–13). Pittsburgh: University of Pittsburgh Press.

Bradshaw, S. (2014). Engendering development and disasters. *Disasters*, 30, 34–55.

- Britton, N. R. (2005). What's a word—Opening up the debate. In R. W. Perry & E. L. Quarantelli (Eds.), *What is a disaster: New answers to old questions* (pp. 60–78). Philadelphia: Xlibris Publishers.
- Buckle, P. (2005). Mandated definitions, local knowledge and complexity. In R. W. Perry & E. L. Quarantelli (Eds.), *What is a disaster: New answers to old questions* (pp. 173–200). Philadelphia: Xlibris Publishers.
- Carr, L. T. (1932). Disaster and the sequence-pattern concept of social change. *American Journal of Sociology*, 38, 207–218.
- Chakraborty, J., Collins, T., Montgomery, M., & Gri-neski, S. (2014). Social and spatial inequities in exposure to flood risk in Miami. *Florida, Natural Hazards Review*, 15(3), 152–157.
- Cisin, I. H., & Clark, W. B. (1962). The methodological challenge of disaster research. In G. Baker & D. Chapman (Eds.), *Man and society in disaster* (pp. 23– 54). New York, NY, USA: Basic Books.
- Clausen, L. (1992). Social differentiation and the long-term origin of disasters. *Natural Hazards*, 6, 181–190.
- Cutter, S., Ash, K., & Emrich, C. (2014). The geographies of community disaster resilience. *Global Environmental Change*, 29, 65–77.
- Drabek, T. E. (2013). *The human side of disaster* (2nd ed.). Boca Raton, FL, USA: CRC Press.
- Drabek, T. E., & McEntire, D. (2003). Emergent phenomena and the sociology of disaster. *Disaster Prevention and Management*, 12(2), 97–112.
- Dynes, R. R. (1998). Coming to terms with community disaster. In E. L. Quarantelli (Ed.), *What is a disaster: Perspectives on the question* (pp. 109–126). London: Routledge.
- Fischer, H. (2003). The critics corner: The sociology of disaster. *International Journal of Mass Emergencies and Disasters*, 21, 91–108.
- Fritz, C. E. (1961a). Disaster. In R. Merton & R. Nesbit (Eds.), *Contemporary social problems* (pp. 651–694). New York, NY, USA: Harcourt Publishers.
- Gaillard, J. C. (2010). Vulnerability, capacity and resilience. *Journal of International Development*, 22, 218–232
- <https://udspace.udel.edu/server/api/core/bitstreams/40a596ab-957b-40e7-8528-594479a1cf25/content> (This paper is an expansion of remarks presented as the inaugural Distinguished Lecture on Disaster and Risk at the Disaster Research Center, Department of Sociology and Criminal Justice, University of Delaware, Newark, 17 April 1997.)
- Jigyasu, R. (2005). Disaster: A reality or construct? In R. W. Perry & E. L. Quarantelli (Eds.), *What is a disaster: New answers to old questions* (pp. 49–59). Philadelphia: Xlibris Publishers.
- Kreps, G. A. (1984). Sociological Inquiry and Disaster Research. *Annual Review of Sociology*, 10, 309–330. <http://www.jstor.org/stable/2083178>
- Kreps, G. A. (1989). Disaster and the social order. In G. A. Kreps (Ed.), *Social structure and disaster* (pp. 31– 51). Newark, DE, USA: University of Delaware Press.
- Kreps, G. A. (1998). Disaster as systemic event and social catalyst. In E. L. Quarantelli (Ed.), *What is a disaster: Perspectives on the question* (pp. 31–55). London: Routledge.

Lindell, M. K. (2013). Disaster studies. *Current Sociology Review*, 61(5-6), 797-825.

Peacock, W., & Bates, F. L. (1987). Disasters and social change. In R. Dynes, B. De Marchi, & C. Pelanda (Eds.), *Sociology of disasters* (pp. 291-330). Milan, Italy: Franco Angeli.

Peacock, W., & Ragsdale, A. K. (1997). Social systems, ecological networks and disasters. In W. Peacock, B. Morrow, & H. Gladwin (Eds.), *Hurricane Andrew* (pp. 20-35). New York, NY, USA: Routledge.

Stallings, R. A. (2002). Weberian Political Sociology and Sociological Disaster Studies. *Sociological Forum*, 17(2), 281-305. <http://www.jstor.org/stable/3070327>

Youngman, Nicole (2020) Understanding Disaster Vulnerability: Floods and Hurricanes. In K. A. Gould & T. L. Lewis (Eds.), *Twenty lessons in environmental sociology* (pp. 127-141). New York, NY: Oxford University Press.

Core Course: AN INTRODUCTION TO GEOSPATIAL TECHNOLOGY

Course Learning Outcomes:

CO1: Understand the principles of geospatial technology

CO2: Create and customise various spatial thematic layers

CO4: Apply geospatial technology tools and techniques at the basic and advanced level

CO5: Explore the different real world application areas of geospatial technology

Course Content

Module 1: Map Basics

Define Map – importance of Map; Basic mapping principles - scale, Map projections and coordinate systems; Data representation and Map symbolization - colours and patterns; map generalization; Elements of map design and layout Map;

Module 2: Fundamentals of GIS

Introduction to GIS-History of GIS - Component of GIS; Geographic data models-Raster and Vector data, Metadata, Networks, topology, Non-Spatial data; Fundamental concepts in Remote Sensing-EMR-Remote Sensing Platforms-Data acquisition-resolution of remote sensing data; Interpretation of Remote Sensing Data

Module 3: GIS Operations and its Importance

Geo-referencing – Database Creation – Data vectorization and editing - Add XY Data - Buffer-Merge – Split – Update - Queries - Field Calculator Operations –Measurements - Summary Statistics – Clip - Grid Preparation – Update – Erase – Qfield data collection - Adding GeoTag Photo - Interpolation -thematic map preparation; Map layout Design

Module 4: Fundamental Concepts of Remote Sensing

History of Remote Sensing – Electromagnetic Energy – Characteristics of Electromagnetic spectral regions – Energy interaction with earth surface features – spectral response of natural earth surface features – Sensor system used in remote sensing – resolution of remote sensing data - Earth Observation Satellites – weather and marine conservation satellites

Module 5: Digital Image Processing and Application

Sources of Spatial Data – Image Rectification – Image Enhancement – Band Combination – Image Classification – Index calculation – Thermal Image processing – DEM data analysis – Applications of remote sensing data in disaster management.

Essential Readings:

1. Pradip Kumar Guha (2013), Remote Sensing for the beginner, Third Edition, East-West Press, New Delhi.
2. Kang-Tsung Chang (2018), Introduction to Geographical Information Systems, McGraw Hill Education.
3. Michael N. Demers (2009), Fundamentals of Information Systems, Fourth Edition, John Wiley & Sons, Inc
4. Jonathan E. Campbell, Michael Shin (2012), Geographic Information System Basics, <http://lardbucket.org>
5. Fundamentals of Remote Sensing, A Canada Centre for Remote Sensing Tutorial, Natural Resources, Canada
(https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/earthsciences/pdf/resource/tutorial/fundamentals_e.pdf)
6. <https://www.qgis.org/en/site/>
7. <https://gisenglish.geojamal.com/2019/04/qgis-34-training-manual-read-and.html>
8. P.S Roy, R.S Dwivedi and Vijayan D(), Remote Sensing Applications, National Remote Sensing Centre
(https://www.nrsc.gov.in/sites/default/files/pdf/ebooks/Chap_7_Geosciences.pdf)

CORE COURSE: GEOGRAPHICAL INFORMATION SYSTEMS

Course Learning Outcomes:

CO1: Understand the history and development of spatial technology

CO2: Locate the significance of GIS in contemporary world

CO3: Explore and generate GIS data from open source

CO4: Analyse methodological aspects of GIS

CO5: Apply GIS in different real world situations

Course Content:

Module-1

Spatial Information System : An overview, conceptual model of spatial information science; Evolution of GIS, Basic concepts, scope and approaches of GIS, Components of GIS; GIS- Application, Implementation and Management

Module - 2

Data generation – Fieldwork: GPS Survey, Total Station Survey; Spatial and Non-Spatial Informations; Data generation – Lab work: Various online sources of topographical maps, cadastral maps etc; Sources of aerial photographs and satellite images;

Module - 3

Spatial referencing – Image rectification, image to image rectification, rubber sheeting; Database creation – Point, line, polygon, topology creation, network data set creation; Vectorization – point, line, polygon; Database Management – adding – editing – updating – deleting – topology rules apply and editing

Module - 4

Basic GIS analytical techniques – Clip – Select – Erase – Summary Statistics – Frequency Statistics
Advanced GIS analytical techniques – buffer- network analysis – dissolve – reclassification - interpolation – 3D analysis – grid preparation – density - web GIS

Module -5

GIS Application; Demographic aspects; Hydrology, Transport, Utility mapping and Disaster management

Essential Readings:

Abdul-Rahman, Alias, Pilouk, and Morakot (2008), Spatial Data Modelling for 3D GIS,

Chang, K, Introduction to Geographic Information Systems. (5th Ed.), McGraw Hill.

HananSamet (2006), Foundations of Multidimensional and Metric Data Structures, Morgan Kaufmann Publishers.

Okabe, A., Boots, B., Sugihara, K. and Chiu, S. N (2000) Spatial Tesselations – Concepts and Applications of Voronoi Diagrams (2ndEd.), John Wiley and Sons.

Paul A. Longley, Michael F. Goodchild, David J. Maguire, David W. Rhind, Geographic Information Systems and Science, John Wiley & Sons Ltd.

Peter A. Burrough, Rachael A. McDonnell and Christopher D. Lloyd (2014), Principles of Geographical Information Systems, International Third Edition, Oxford University Press, United Kingdom,

Raper, J (2000), Multi Dimensional Geographic Information Science, Taylor and Francis.

Springer.

Worboys and Duckham (2004), GIS: A Computational Perspective, CRC Press,

CORE COURSE: REMOTE SENSING

Course Learning Outcomes

CO1: Understand the history and evolution of Remote Sensing

CO2: Identify and use various sources of satellite imageries from web platforms

CO3: Illustrate the features of remote sensing data

CO4: Carry out image processing using different software

CO5: Analyse spatial data from imageries

CO6: Analyse the temporal changes from imageries and prepare various thematic maps

Course Content:

Module-1

Remote sensing; evolution and scope, Types; EMR and remote sensing; Types of resolution; Introduction to major software packages; Advantages and disadvantages of remote sensing

Module -2

Aerial remote sensing - Aerial photo interpretation – methods of stereoscope viewing – Orientation of aerial photographs –determination of photo scale – determination of height from aerial photos - interpretation of stereo pair

Module-3

Satellite remote sensing – Data sources identification and generation; Satellite image interpretation; Interpretation keys.

Module-4

Satellite remote sensing data processing; FCC generation – image enhancement – high pass filter – low pass filter – edge detection; resolution merge; spectral graph; subset image; image classification – AOI – supervised classification – unsupervised classification – ground truth verification – accuracy assessment; band ratios – NDVI – NDBI – SAVI; LST calculation; FRAGSTAT; aerosol calculation – lineament extraction.

Module-5

Remote Sensing Application-Hydrology-Urban studies-Wildlife ecology –Agriculture-Soil-Change Detection analysis-Transportation

Essential Readings:

Bossler J.D (2002), Manual of Geospatial Science and Technology, Taylor and Francis, London.

Girard M.C and Girard C.M (2003), Processing of Remote Sensing Data, Oxford & IBH, New Delhi.

John R. Jensen (2000), Remote Sensing of the environment: An earth resource perspective, Pearson publication.

Lillesand T M., and Kiefer R W., (2000), Remote Sensing and Image Interpretation, New York, John Wiley and Sons.

Pradip Kumar Guha (2013), Remote Sensing for the beginner, Third Edition, East-West Press, New Delhi.

Suresh S and Mani K., (2017), Application of Remote Sensing in understanding the relationship between NDVI and LST, IJRET, Vol. 6, Issue: 02.

CORE COURSE: FIELD PRACTICUM – I

Course Learning Outcomes

CO1: Situate the disasters, risk and vulnerabilities within the geographical and socio-political structure of the society and its ecology

CO2: Identify problems in the society, analyze the causes, capacity and resources available to deal with those problems

CO3: Become familiar with the working of social welfare and disaster governance agencies in the society.

CO4: Use technology to map the geophysical locations to identify disaster risk propensity as part of making disaster plans.

CO5: Organize and lead community camps

CO6: Implement community intervention program/ project based on community learning.

CO7: Develop skill in documentation and writing reports

CO8: Make visual and oral presentations based on social analysis and projects undertaken

Components of First Semester Fieldwork:

- Observation visits & interactions with experts
- Community Camp
- Community field work

Field work preparation: workshop will be conducted to discuss self-reflexive field work practices. Students will be prepared to critically understand the socio-political constitution of 'field;' The power structure inherent in interactive spaces- between students and the community and between the community members will be discussed. Ethical dilemmas involved in practice situations, listening skills, and participatory approaches of problem identification and analysis will be part of field work training.

Community Profile: Using the skills developed from Research Methodology and the theoretical perspectives, the students are to prepare a community profile of the community where they conduct the camp. Community Profile will include history of the community, the social life, culture and practices of the community; environmental and geographical location; livelihood and economic conditions; education; health; infrastructural facilities; governance and politics; problems and capacities of the community.

Action projects: Students will be split into teams and each team should take up a social issue and execute a small project to tackle any aspect of this social issue.

Fieldwork Report & Presentation: As part of the fieldwork conducted the student should mandatorily submit a report and do a presentation about the work undertaken.

Reading list:

Atkinson Paul and Amanda Coffey, Sarah Delmont et.al. (2001). Handbook of Ethnography. London: Sage.

Carol A. Bailey (2007) A Guide to Qualitative Field Research, Sage

Dynes, Sarah and Terry Williams. (2018). On Ethnography. US: Wiley.

Fook, J., and Gardner, F. (2007). Practising Critical Reflection: A resource handbook. Maidenhead: Open University Press

Iain Hay and Meghan Cope eds. (2021) Qualitative Research Methods in Human Geography, OUP

Nicholas Clifford, Shaun French, Gill Valentine (2003) Key Methods in Geography, Sage

Kothari, C.R. (2004). Research methodology: methods and techniques. New Age International (P) Limited Publishers.

Newman, W.L. (2014). Social research methods: qualitative and quantitative approaches. Pearson Education Ltd.

Oommen, T. K. (2007). Knowledge and Society: Situating Sociology and Social Anthropology, Revised Edition. New Delhi: OUP.

Singh, A.K. (2016). Tests, measurements and research methods in behavioral sciences. Bharati Bhavan

Yip, K. S. (2006). Self-reflection in reflective practice: A note of caution. British Journal of Social Work, 36, 777-788

Walliman, N. (2011). Research Methods: the basics. Routledge.



**SREE SANKARACHARYA UNIVERSITY OF SANSKRIT
KALADY**

Project Mode PG Programme

**Multidisciplinary Dual Main Master's in
Disaster Management and Mitigation**

*(Associating Disciplines: Geography, Psychology, Sociology and
Social Work)*

Sanctioned by

Ministry of Higher Education, Government of Kerala

Programme Structure and Syllabi

Programme Highlights

- A Multidisciplinary Innovative PG Programme
- Self Sustaining Mode
- Fast emerging academic field with Cross Disciplinary Knowledge
- Minimum Credit requirement is 92
- Intake – 40 Seats
- Dual Main Programme ensuring equivalency with other Universities
- Awarding Four Separate Degrees in a Single Programme
 - ❖ *M.Sc. in Geography and DMM*
 - ❖ *M.Sc. in Psychology and DMM*
 - ❖ *MA in Sociology and DMM*
 - ❖ *Master of Social Work and DMM*
- Fieldwork in all semesters for ground experience
- Internships

M.Sc. IN PSYCHOLOGY AND DMM
SCHEME AND SYLLABUS
2023

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Programme Outcomes (POs) of SSUS for PG Programmes

- PO 1 Critical Thinking:** Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.
- PO 2 Communication:** Listen, read, comprehend, speak and write clearly and effectively in person and through electronic media in English/regional language/language of the discipline and exhibit sound domain knowledge including academic concepts and terminologies.
- PO 3 Self-directed and Life-long Learning:** Engage in independent and lifelong learning in the broadest context of socio-technological changes.
- PO 4 Ethics:** Understand different value systems including one's own, as also the moral dimensions of one's actions, and accept responsibility for it.

Programme Specific Outcomes (PSOs) of M.Sc. in Psychology and Disaster Management

- PSO 1 Understand the natural and social aspects concerning disasters and disaster management mechanisms.
- PSO 2 Analyze critically social and ecological vulnerabilities, hazards and resilience.
- PSO 3 Critically analyze and apply existing global and national level frameworks and policies in disaster risk reduction and mitigation.
- PSO 4 Engage and develop participatory community-based risk reduction plan thereby empowering the communities.
- PSO 5 Demonstrate competence in using technology for disaster management and mitigation.
- PSO 6 Identify the capacities to perform a basic research, practice or policy work in the field of disasters (PO4).
- PSO 7 Apply the skills to practice counseling and behavioral intervention strategies in community, organizational and disaster settings for personal enhancement (PO3).
- PSO 8 Evaluate the cognitive processes of perception, creativity, reasoning and problem solving (PO1).
- PSO 9 Understand maladaptive behavior using interviews, clinical observation and psychological tests (PO2, PO3).
- PSO 10 Exhibit skills for effective communication of psychological concepts and research, for different purposes (PO2).

Programme Structure

(Total Minimum Credits: 92)

Semester I

Sl. No.	Course	Discipline	Core/ Elective	Credits	No. of Students	Hours/ Week
1	Understanding Disasters and Disaster Management	DMM	Core	4	40	4
2	Disaster and Society	DMM	Core	4	40	4
3	Fieldwork (Community)	DMM	Core	4	40	10 days (12hrs x 10 = 120hrs)
4	Fundamentals of Psychological Processes	Psychology	Core	4	10+13=23	4
5	Environmental Psychology	Psychology	Core	4	10+13=23	4
6	An Introduction to Geo-Spatial Technology	Geography	Cross Disciplinary Core	4	40	4
Total Credits				24		

Semester II

Sl. No.	Course	Discipline	Core/ Elective	Credits	No. of Students	Hours/ Week
1	Disaster Governance	DMM	Core	4	40	4
2	Fieldwork (PRA Camp)	DMM	Core	4	40	10 days (12hrs x 10 = 120hrs)
3	Disasters and Mental Disorders	Psychology	Core	4	10+13=23	4
4	Community Based Risk Reduction	Social Work	Cross Disciplinary Core	4	40	4
5	Sociology of Change, Development and Sustainability	Sociology	Cross Disciplinary Core	4	40	4
6	Multi-disciplinary Elective	Sanskrit	Elective	4	40	4
Total Credits				24		

Semester III

Sl. No.	Course	Discipline	Core/ Elective	Credits	No. of Students	Hours/ Week
1	Methodologies in Disaster Management Research	DMM	Core	4	40	4
2	Psychological First Aid	DMM	Skill Course	1	40	15hrs/ Sem
3	Life Saving Skills	DMM	Skill Course	1	40	15hrs/ Sem
4	Experimental Psychology(Practicals)	Psychology	Core	4	10+13=23	4
5	Field Work	Psychology	Core	4	10+13=23	10 days (12hrs x 10 = 120hrs)
6	Stress and Coping	Psychology	Cross Disciplinary Core	4	40	4
7	Multi-disciplinary Elective	Any Department	Elective	4	40	4
Total Credits				22		

Semester IV

Sl. No.	Course	Discipline	Core/Elective	Credits	No. of Students	Hours/ Week
1	Project Planning and Administration for Disaster Risk Reduction	DMM	Core	4	40	4
2	1. Disaster Finance and Humanitarian aid 2. Disaster Communication 3. Disaster and Geopolitics 4. Public Health and Mental Health	DMM	Elective	4	40	4
3	Disaster Counselling	Psychology	Core	4	10+13=23	4
4	Dissertation	DMM	Core	6	40	6
5	Internship	DMM	Core	4	40	4
Total Credits				22		

PROGRAMME SYLLABI

DMM CORE COURSE: UNDERSTANDING DISASTERS AND DISASTER MANAGEMENT

Semester: 1

Credits: 4

Course Outcomes (COs)

- CO1 Understand the basic concepts of disaster and characteristics of disasters.
- CO2 Recognize the importance of environment for understanding disasters and disaster management.
- CO3 Evaluate various physical elements and forces acting on the surface of the earth.
- CO4 Examine various process and drivers behind the occurrence of disasters.
- CO5 Analyse the impacts of disasters in various sectors in different context.
- CO6 Develop skills in identification and preparation for vulnerability and risk mapping.

Module 1: Basic Concepts of Disaster and Disaster Management

- 1.1 Understanding and defining disaster: Acts of God, Acts of Nature, Disasters as joint effects of nature and society, Injustice and human vulnerability to disasters.
- 1.2 Disasters in the context of Physical and Environmental Vulnerability
- 1.3 Classification of Disasters; Disaster cycle
- 1.4 Need for disaster management in today's world.
 - 1.4.1 Disaster management in India
 - 1.4.2 Disaster management in Kerala
- 1.5 Basic steps in Disaster Management and Mitigation

Essential Reading

- Bankoff B (2023) Time is of the essence: Disasters, Vulnerability and History. *International Journal of Mass Emergencies & Disasters*. Volume 22, Issue 3. <https://doi.org/10.1177/028072700402200303>
- Collins, A.E. (2009). *Disaster and Development* (1st ed.). Routledge. <https://doi.org/10.4324/9780203879238>
- Hewitt K. (2017) *Regions of Risk: A Geographical Introduction to Disasters*. Taylor and Francis. ISBN: 9781317894162, 1317894162
- Joice K. Joseph, Dev Anand, P. Prajeesh, Anand Zacharias, Anu George Varghese, A.P. Pradeepkumar, K.R. Baiju, (2020) Community resilience mechanism in an unexpected extreme weather event: An analysis of the Kerala floods of 2018, India, *International Journal of Disaster Risk Reduction*, Volume 49, Science Direct. ISSN 2212-4209, <https://doi.org/10.1016/j.ijdrr.2020.101741>.
- Jones, L. (2019). *The big ones: How natural disasters have shaped us (and what we can do about them)*. Anchor.
- Perry, Ronald W., and Quarantelli, Enrico Louis (2005) *What is a Disaster? New Answers to Old Questions*. United Kingdom, Xlibris.
- Quarantelli, E L (1998) *What is a Disaster? Perspectives on the Question*. United Kingdom, Routledge.
- Taori, K. (2005). *Disaster Management Through Panchayati Raj*. India: Concept Publishing Company.
- Vasilescu L, A Khan and H Khan (2008) *DISASTER MANAGEMENT CYCLE – A THEORETICAL APPROACH*. Editura Universitaria Craiova. (Free download: <https://www.cceol.com/search/article-detail?id=147294>)

Module 2: Natural Hazards and physical environment

2.1 Defining natural phenomena and natural hazards- physical forces acting on the surface of the earth (endogenic and exogenic forces)

2.2 Ecosystem and its components - Ecosystem services – Biodiversity

2.3 Hazards in different geographical settings: in mountains and coastal environment

2.4 Contextualizing climate change, extreme events and natural hazards.

Essential Reading

Coratza, P., & De Waele, J. (2012). Geomorphosites and natural hazards: teaching the importance of geomorphology in society. *Geoheritage*, 4, 195-203.

Douglas, K. (2021). The nature fix. *New Scientist*, 249(3327), 36-40.

Hewitt, K. (2004). Geomorphic hazards in mountain environments. *Mountain geomorphology*, 187-218.

Klein, N. (2015). *This changes everything: Capitalism vs. the climate*. Simon and Schuster.

Melaku, A., Ivars, J. P., & Sahle, M. (2023). The state-of-the-art and future research directions on sacred forests and ecosystem services. *Environmental Management*, 1-14.

Meli, P., Vieli, L., Spirito, F., Reyes-Riveros, R., Gonzalez-Suhr, C., & Altamirano, A. (2023). The importance of considering human well-being to understand social preferences of ecosystem services. *Journal for Nature Conservation*, 126344.

Pelling M. 2010. *Adaptations to Climate Change: From Resilience to Transformation*. Taylor & Francis. ISBN: 9781134022014, 1134022018

Sandhu, H., Zhang, W., Meinzen-Dick, R., ElDidi, H., Perveen, S., Sharma, J., ... & Priyadarshini, P. (2023). Valuing ecosystem services provided by land commons in India: implications for research and policy. *Environmental Research Letters*.

Scheidegger, A. E. (2012). Theoretical Geomorphology. Germany: Springer Berlin Heidelberg.

Srinivas, H., & Nakagawa, Y. (2008). Environmental implications for disaster preparedness: lessons learnt from the Indian Ocean Tsunami. *Journal of environmental management*, 89(1), 4-13.

Takacs, V., & O'Brien, C. D. (2023). Trends and gaps in biodiversity and ecosystem services research: A text mining approach. *Ambio*, 52(1), 81-94.

Zimmermann, M., & Keiler, M. (2015). International frameworks for disaster risk reduction: Useful guidance for sustainable mountain development? *Mountain Research and Development*, 35(2), 195-202.

Module 3: Natural process and disasters

3.1 Spatial distribution of disasters- Drivers and causes, salient features
History of major disaster events – Global and Local

3.2 Geological disasters (Earthquake, landslide, tsunami)

3.3 Climatological disasters (flood, drought, cyclones; lightning)

3.4 Hydrological disasters (Flood, GLOF, avalanche)

3.5 Major natural disasters: Case studies

Essential Reading

Hewitt K. 2017. *Regions of Risk: A Geographical Introduction to Disasters*. Taylor and Francis. ISBN: 9781317894162, 1317894162

Jones LM. *The Big Ones: How Natural Disasters Have Shaped Us (and what We Can Do about Them)*. Double day Publishers. ISBN: 9780385542708, 0385542704

Okuyama, Y., & Sahin, S. (2009). Impact estimation of disasters: a global aggregate for 1960 to 2007. *World Bank Policy research working paper*, (4963).

Pfister C., & C Mauch (Ed) (2009) Natural Disasters, Cultural Responses: Case Studies toward a Global Environmental History. United Kingdom: Lexington Books.

Rodriguez H, Joseph E. Trainor, William Donner (2017) Handbook of Disaster Research. Springer. ISBN: 9783319632544, 331963254X

Scott, R., MacDonald, G., Horn, W., Bolt, B. (1977). Geological Hazards: Earthquakes - Tsunamis - Volcanoes - Avalanches - Landslides - Floods. Germany: Springer New York.

Thomas, V., Albert, J. R. G., & Hepburn, C. (2014). Contributors to the frequency of intense climate disasters in Asia-Pacific countries. *Climatic Change*, 126, 381-398.

Wenzel F., & J Zschau. (2013). Early Warning for Geological Disasters: Scientific Methods and Current Practice. Germany: Springer Berlin Heidelberg

Module 4: Human induced disasters

4.1 Human-induced disasters: Causative factors (Environmental degradation enhancing pre-existing environmental vulnerabilities)

4.2 Technological/human-made disasters (industrial, nuclear, transportation, dam failure, stampede, terrorism, conflicts: war, cyber-attacks)

4.3 Chemical disasters and biological disasters; (chemical leaks and explosions, epidemic/pandemic, pest attacks/locusts/insect infestations)

4.4 Human-induced disasters: Case studies

Essential Reading

Ajin, R.S., Nandakumar, D., Rajaneesh, A. et al. (2022). The tale of three landslides in the Western Ghats, India: lessons to be learnt. *Geoenviron Disasters* 9, 16 <https://doi.org/10.1186/s40677-022-00218-1>

- Beigel, A., & Berren, M. R. (1985). Human-induced disasters. *Psychiatric Annals*, 15(3), 143-150.
- Biswas, Asit K. (2004). "Dams: cornucopia or disaster?" *International Journal of Water Resources Development* 20.1 3-14.
- Cutter, S. L. (1996). Vulnerability to environmental hazards. *Progress in human geography*, 20(4), 529-539. (Free download)
- Dave R K (2018) *Disaster Management in India: Challenges and Strategies*. Prowess Publishing.
- Ghassemi, F., Jakeman, A. J., & Nix, H. A. (1995). *Salinisation of land and water resources: human causes, extent, management and case studies*. CAB international.
- Kondratyev, Kirill Ya, Alexei A. Grigoryev, and Costas A. Varotsos. (2002). *Environmental disasters: Anthropogenic and natural*. London, England: Springer.
- Kumar, Jitendra. (2020). "Biological disaster management." *International Journal of Technical Research & Science* 5.7. 5-10.
- Nibanupudi, H. K., Gupta, A. K., & Rawat, P. K. (2015). Mitigating climatic and human induced disaster risks through ecosystem resilience: Harmonizing built and natural environments in the HKH region. *Mountain hazards and disaster risk reduction*, 139-157.
- Perry, John. *Nuclear Weapons and the Environment: An Ecological Case for Non-proliferation*. Lexington Books, 2021.
- Salazar, Mary K., and Betty Kelman. (2002). "Planning for biological disasters: Occupational Health Nurses as "First Responders"." *AAOHN Journal* 50.4. 174-181.
- Sharma, J., & Ravindranath, N. H. (2019). Applying IPCC 2014 framework for hazard-specific vulnerability assessment under climate change. *Environmental Research Communications*, 1(5), 051004.

Sriramachari, S. (2004). The Bhopal gas tragedy: An environmental disaster. Current Science, 86(7), 905-920.

Turner, Alan Keith(2018). "Social and environmental impacts of landslides." Innovative Infrastructure Solutions 3. 1-25.

Wilson, E. O. (2017). Half-Earth: Our Planet's Fight for Life. United Kingdom: WW Norton.

Module 5: Activities and Processes in Disaster Management and Mitigation

5.1 Disaster Preparedness – risk assessment, emergency plan creation, emergency response teams

5.2 Response – saving lives, reducing health impacts, normalising post-disaster situation

5.3 Recovery – rebuild infrastructure, provide assistance to the affected

5.4 Mitigation – actions to reduce future disasters

Essential Reading

Collins, L. R. (2023). Disaster management and preparedness. Taylor & Francis. CRC Press.

Kiefer, J. J., Jerolleman, A. (2012). Natural Hazard Mitigation. United Kingdom: Taylor & Francis.

Pelling M. (2010). Adaptations to Climate Change: From Resilience to Transformation. Taylor & Francis. ISBN: 9781134022014, 1134022018

Rubin, O., Dahlberg, R. (2017). A Dictionary of Disaster Management. United Kingdom: OUP Oxford.

UN (2022). United Nations Global Assessment Report on Disaster Risk Reduction – Our World at Risk: Transforming Governance for a Resilient Future. Downloadable at: www.undrr.org/GAR2022

Suggested Reading

- Aaltola, M. (2012). Theoretical Departures to Disasters and Emergencies. In: Attinà, F. (eds) *The Politics and Policies of Relief, Aid and Reconstruction*. Palgrave Macmillan, London. https://doi.org/10.1057/9781137026736_4 (Free download)
- Al-Husain, R. (2023). Epidemiological disaster management: Literature survey and analysis. *International Journal of Innovative Research and Scientific Studies*, 6(1), 49-63.
- André van Amstel, Md. Nazrul Islam (Ed) (2021). *India: Climate Change Impacts, Mitigation and Adaptation in Developing Countries*. Springer International Publishing.
- Anwana, E. O., & Owojori, O. M. (2023). Analysis of Flooding Vulnerability in Informal Settlements Literature: Mapping and Research Agenda. *Social Sciences*, 12(1), 40.
- Botzen, W. W., Deschenes, O., & Sanders, M. (2019). The economic impacts of natural disasters: A review of models and empirical studies. *Review of Environmental Economics and Policy*.
- Britton, N. R. (1986). Developing an understanding of disaster. *The Australian and New Zealand Journal of Sociology*, 22(2), 254-271.
- Carmona, R., Reed, G., Thorsell, S., MacDonald, J. P., Dorough, D. S., Rai, T. B., & Sanago, G. (2023). A New Partnership with Indigenous Peoples? An Analysis of the Intergovernmental Panel on Climate Change's Sixth Assessment Report. [researchsquare.com](https://www.researchsquare.com) (Free download)
- Dhameja, A., Medury, U., Sahni, P. (2018). *Disaster mitigation: experiences and reflections*. India: PHI Learning.
- Esteban M, T Shibayama and H Takagi (Ed) (2015). *Handbook of Coastal Disaster Mitigation for Engineers and Planners*. Netherlands: Elsevier Science.

- Ghosh, A., Sen, A., & Frietsch, M. (2023). "What is a 'very severe cyclone' please"? Uncovering knowledge and communication gaps in climate resilience realities. *International Journal of Disaster Risk Reduction*, 86, 103499.
- Guha-Sapir, D., Santos, I., & Borde, A. (Eds.). (2013). *The economic impacts of natural disasters*. Oxford University Press.
- Kamal, M., Zahid, D., & Malak, M. A. (2023). Why is women's leadership important for enhancing disaster resilience to natural perturbations. *Coastal Disaster Risk Management in Bangladesh: Vulnerability and Resilience*.
- Kumar, S., David Raj, A., Kalambukattu, J. G., & Chatterjee, U. (2023). Climate Change Impact on Land Degradation and Soil Erosion in Hilly and Mountainous Landscape: Sustainability Issues and Adaptation Strategies. In *Ecological Footprints of Climate Change: Adaptive Approaches and Sustainability* (pp. 119-155). Cham: Springer International Publishing.
- Maskrey, A. (1989). *Disaster Mitigation: A Community Based Approach*. United Kingdom: Oxfam.
- Mikulecký, P., Punčochářová, A., Babič, F., Bureš, V., Čech, P., Husáková, M., & Zanker, M. (2023). Dealing with risks associated with tsunamis using indigenous knowledge approaches. *International Journal of Disaster Risk Reduction*, 103534.
- Nan, Y., Li, Y., Liu, K., Dai, B., Lai, J., & Zhang, Y. (2023). Global earthquake disaster and emergency response in 2021. In *Advances in Civil Engineering: Structural Seismic Resistance, Monitoring and Detection* (pp. 606-611). CRC Press.
- Quarantelli, E. L. (1989). Conceptualizing disasters from a sociological perspective. *International Journal of Mass Emergencies & Disasters*, 7(3), 243-251.

Roy, P., Pal, S. C., Chakraborty, R., Chowdhuri, I., Saha, A., & Shit, M. (2023). Effects of climate change and sea-level rise on coastal habitat: Vulnerability assessment, adaptation strategies and policy recommendations. *Journal of Environmental Management*, 330, 117187.

Wiest, R. E., Mocellin, J. S., & Motsisi, D. T. (1994). The needs of women in disasters and emergencies (pp. 12-6). Winnipeg, MB, Canada: Disaster Research Institute, University of Manitoba.

Other Resources from WWW:

Ramsar Convention. (2017). Wetlands: A natural safeguard against disasters. <https://www.ramsar.org/document/resolution-xii13-wetlands-and-disaster-risk-reduction>

United Nations Office for Disaster Risk Reduction. (n.d.). Disaster risk reduction & disaster risk management. Sendai Framework: <https://www.undrr.org/implementing-sendai-framework>

World Bank: <https://www.worldbank.org/en/topic/disasterriskmanagement>

World Meteorological Organization. (2021). WMO atlas of mortality and economic losses from weather, climate and water extremes. <https://public.wmo.int/en>

DMM CORE COURSE: DISASTER AND SOCIETY

Semester: 1

Credits: 4

Course Outcomes (COs):

- CO1 Understand Sociology as a scientific discipline and its theoretical approaches.
- CO2 Understand the social structure and transformations of Indian and Kerala society
- CO3 Understand the framing of disasters through the lens of Sociology.
- CO4 Appraise how social structures influence disaster experience and think critically about how social dynamics shape the ways people and communities prepare for, face and recover from disaster.

Module 1: The Study of Human Society

- 1.1. Emergence of Sociology as a Scientific Discipline; Nature & Scope
- 1.2. Sociological Perspective: Common Sense Vs Sociological Imagination; Units of Study, Methodological Orientations: Positivism, Humanism, Materialism
- 1.3. Theoretical Approaches - Classical Tradition, Structuralism, Functionalism, Structural-Functionalism, Conflict Perspectives, Critical Theory, Social Constructionism, Post Structural, Postmodern and Neo-Social Perspectives

Essential Reading

- Bottomore, T. B. (2010). Sociology: A Guide to Problems and Literature. United Kingdom: Routledge.
- Davis, K. (1963). Human Society. United Kingdom: Macmillan.
- Giddens, A., Sutton, P. W. (2017). Sociology. Germany: Wiley.
- Inkeles, A. (1964). What is Sociology? An Introduction to the Discipline and Profession. United States: Prentice-Hall.

Mills, C. W. (2022). The Sociological Imagination. India: Aakar.

Oommen, T.K. & Venugopal C.N. (2018). Sociology. Delhi : Eastern Book Company.

Timasheff, N. S. (1963). Sociological Theory: Its Nature and Growth. United States: Random House.

Module 2: Social Structure, Process and Transformations

2.1. Basic Concepts: Society, Community, Association, Socialisation, Institution, Culture, Social groups, Social Stratification and Mobility, Social System, Social Structure, Social Problems and Social Change

2.2. Indian Context: Family and Kinship; Caste and Class; Economy and Society; Polity and Society; Education and Society; Urban, Peasant and Tribal Communities; Unity in Diversity

2.3. Kerala Context: Genealogy of Structural Changes in Kerala Society; Caste, Class and Religion; Family, Marriage and Gender; The Unique Kerala

Essential Reading

A.M. Shah. (1996). Social Structure and Change(vol. 4 & 5). New Delhi: Sage

Beteille.A. (2011).Caste, Class and Power.New Delhi: Oxford

M.N. Srinivas. 1997. Caste: its twentieth century avatar. New Delhi: Penguin

Oommen, T.K. & Venugopal C.N. (2018). Sociology. Delhi : Eastern Book Company.

Elamkulam P.N. Kunjan Pillai. 1970. Studies in Kerala History. Kottayam: National Book Stall.

Rathi Ramachandran. et.at. 2005.History of Medieval Kerala. New Delhi: Pragati Publications.

Raja Jayaraman. 1981. Caste and Class: dynamics of inequalities in Indian society. Delhi: Hindustan Publishing

Module 3: Sociology of Disaster

3.1. Disaster and Society - Disasters as a Social Phenomenon and Significance of Sociological Approach; The Hazards-Disaster Tradition; Human Ecology, Vulnerability, and Resilience; The Crisis Approach; Culture, Knowledge and Religious Interpretations of Disaster

3.2. Framing Disasters: Constructionist Theories - Weberian Political Sociology; Ulrich Beck - Risk Society; Anthony Giddens - The Consequences of Modernity

3.3. The Social Science Disaster Paradigm; Environment, Development and Sustainability; Studying Future Disasters and Crises

3.4. Resilience and Disasters: Case Studies

Essential Reading

Donner, W. R. (2007). The Political Ecology of Disaster: An Analysis of Factors Influencing U.S. Tornado Fatalities and Injuries, 1998-2000. *Demography*, 44(3), 669-685. <http://www.istor.org/stable/30053107>

Handbook of Disaster Research. (2017). Germany: Springer International Publishing. (Ch. 1,2, & 4)

Schutt, R.S. (2010). A Sociological Perspective on Disasters. In Rebuilding Sustainable Communities for Children and Their Families After Disasters: A Global Survey. (2010). United Kingdom: Cambridge Scholars.

Stallings, R. A. (2002). Weberian Political Sociology and Sociological Disaster Studies. *Sociological Forum*, 17(2), 281-305. <http://www.istor.org/stable/3070327>

Module 4: Disaster and Vulnerability Profile

4.1. Vulnerability Profile: Models of Vulnerabilities, Global to Local; Power, Human Rights and Disaster; The Political Ecology of Disaster Vulnerability

4.2. The Cultural Turn in Disaster: Culture and Social Construction, Culture as a Source of Resilience, Culture as a Source of Vulnerability

4.3. Race, Class, Religious affiliation, Caste, Ethnicity, Gender, Sexuality, Children, Youth and Elderly, Disability and Disaster Vulnerability

4.4. Social Capital in Disaster Research; Intersectionality Approach

Essential Reading

Baruah, M. (2023) Slow disaster: Political ecology of hazards and everyday life in the Brahmaputra Valley, Assam. London: Routledge, Taylor & Francis Group.

Cutter S, Boruff B, Shirley W (2003) Social vulnerability to environmental hazards. Soc Sci Q 84:242–261. <https://doi.org/10.1111/1540-6237.8402002>

Disaster Risk Reduction: Community Resilience and Responses. (2018). Germany: Palgrave Macmillan US

Handbook of Disaster Research. (2017). Germany: Springer International Publishing. (Ch.6, 10-14)

Handbook of Hazards and Disaster Risk Reduction. (2012). United Kingdom: Taylor & Francis. (Ch.3-4,6,8-10, 34-38)

The Routledge Handbook of Disaster Risk Reduction Including Climate Change Adaptation. (2020). United Kingdom: Taylor & Francis Group. (Ch.6, 13)

Suggested Reading

Alexander, D. A. (2005). An interpretation of disaster in terms of changes in culture, society and international relations. In R. W. Perry & E. L. Quarantelli (Eds.), What is a disaster: New answers to old questions (pp. 25–38). Philadelphia: Xlibris Publishers.

Amundsen, H. (2012). Illusions of resilience? Ecology and Society, 17(4), 1–19

- Barton, A. H. (1969). *Communities in disaster*. New York, NY, USA: Doubleday.
- Barton, A. H. (1989). Taxonomies of disaster and macrosocial theory. In G. A. Kreps (Ed.), *Social structure and disaster* (pp. 346–350). Newark, DE, USA: University of Delaware Press
- Barton, A. H. (2005). Disaster and collective stress. In R. W. Perry & E. L. Quarantelli (Eds.), *What is a disaster: New answers to old questions* (pp. 125–152). Philadelphia: Xlibris Publishers.
- Bates, F. L., & Peacock, W. G. (1993). *Living conditions, disasters and development*. Athens, GA, USA: University of Georgia Press
- Bates, F. L., & Pelanda, C. (1994). An ecological approach to disasters. In R. Dynes & K. Tierney (Eds.), *Disasters, collective behavior and social organization* (pp. 145–159). Newark, DE, USA: University of Delaware Press
- Berkes, F., & Ross, H. (2013). Community resilience. *Society and Natural Resources*, 26(1), 5–20.
- Birkmann, J., Cardona, O., Carreno, M., Barbat, A., Pelling, M., Schneiderbauer, S., et al. (2014). Theoretical and conceptual framework for the assessment of vulnerability to natural hazards and climate change in Europe. In J. Birkmann, S. Kienberger, & D. Alexander (Eds.), *Assessment of vulnerability to natural hazards* (pp. 1–20). London: Elsevier.
- Boin, A. (2005). From crisis to disaster: Towards an integrative perspective. In R. W. Perry & E. L. Quarantelli (Eds.), *What is a disaster: New answers to old questions* (pp. 153–172). Philadelphia: Xlibris Publishers.
- Boin, A., Comfort, L., & Demchak, C. (2010). The rise of resilience. In L. Comfort, A. Boin, & C. Demchak (Eds.), *Designing resilience* (pp. 1–13). Pittsburgh: University of Pittsburgh Press.
- Bradshaw, S. (2014). Engendering development and disasters. *Disasters*, 30, 34–55.

- Britton, N. R. (2005). What's a word—Opening up the debate. In R. W. Perry & E. L. Quarantelli (Eds.), *What is a disaster: New answers to old questions* (pp. 60–78). Philadelphia: Xlibris Publishers.
- Buckle, P. (2005). Mandated definitions, local knowledge and complexity. In R. W. Perry & E. L. Quarantelli (Eds.), *What is a disaster: New answers to old questions* (pp. 173–200). Philadelphia: Xlibris Publishers.
- Carr, L. T. (1932). Disaster and the sequence-pattern concept of social change. *American Journal of Sociology*, 38, 207–218.
- Chakraborty, J., Collins, T., Montgomery, M., & Gri- neski, S. (2014). Social and spatial inequities in exposure to flood risk in Miami. Florida, *Natural Hazards Review*, 15(3), 152–157.
- Cisin, I. H., & Clark, W. B. (1962). The methodological challenge of disaster research. In G. Baker & D. Chapman (Eds.), *Man and society in disaster* (pp. 23– 54). New York, NY, USA: Basic Books.
- Clausen, L. (1992). Social differentiation and the long-term origin of disasters. *Natural Hazards*, 6, 181–190.
- Cutter, S., Ash, K., & Emrich, C. (2014). The geographies of community disaster resilience. *Global Environmental Change*, 29, 65–77.
- Drabek, T. E. (2013). *The human side of disaster* (2nd ed.). Boca Raton, FL, USA: CRC Press.
- Drabek, T. E., & McEntire, D. (2003). Emergent phenomena and the sociology of disaster. *Disaster Prevention and Management*, 12(2), 97–112.
- Dynes, R. R. (1998). Coming to terms with community disaster. In E. L. Quarantelli (Ed.), *What is a disaster: Perspectives on the question* (pp. 109–126). London: Routledge.
- Fischer, H. (2003). The critics corner: The sociology of disaster. *International Journal of Mass Emergencies and Disasters*, 21, 91–108.
- Fritz, C. E. (1961a). Disaster. In R. Merton & R. Nesbit (Eds.), *Contemporary social problems* (pp. 651–694). New York, NY, USA: Harcourt Publishers.

- Gaillard, J. C. (2010). Vulnerability, capacity and resilience. *Journal of International Development*, 22, 218–232. <https://udspace.udel.edu/server/api/core/bitstreams/40a596ab-957b-40e7-8528-594479a1cf25/content> (This paper is an expansion of remarks presented as the inaugural Distinguished Lecture on Disaster and Risk at the Disaster Research Center, Department of Sociology and Criminal Justice, University of Delaware, Newark, 17 April 1997.)
- Jigyasu, R. (2005). Disaster: A reality or construct? In R. W. Perry & E. L. Quarantelli (Eds.), *What is a disaster: New answers to old questions* (pp. 49–59). Philadelphia: Xlibris Publishers.
- Kreps, G. A. (1984). Sociological Inquiry and Disaster Research. *Annual Review of Sociology*, 10, 309–330. <http://www.jstor.org/stable/2083178>
- Kreps, G. A. (1989). Disaster and the social order. In G. A. Kreps (Ed.), *Social structure and disaster* (pp. 31– 51). Newark, DE, USA: University of Delaware Press.
- Kreps, G. A. (1998). Disaster as systemic event and social catalyst. In E. L. Quarantelli (Ed.), *What is a disaster: Perspectives on the question* (pp. 31–55). London: Routledge.
- Lindell, M. K. (2013). Disaster studies. *Current Sociology Review*, 61(5–6), 797–825.
- Peacock, W., & Bates, F. L. (1987). Disasters and social change. In R. Dynes, B. De Marchi, & C. Pelanda (Eds.), *Sociology of disasters* (pp. 291–330). Milan, Italy: Franco Angeli.
- Peacock, W., & Ragsdale, A. K. (1997). Social systems, ecological networks and disasters. In W. Peacock, B. Morrow, & H. Gladwin (Eds.), *Hurricane Andrew* (pp. 20–35). New York, NY, USA: Routledge.
- Stallings, R. A. (2002). Weberian Political Sociology and Sociological Disaster Studies. *Sociological Forum*, 17(2), 281–305. <http://www.jstor.org/stable/3070327>
- Youngman, Nicole (2020) Understanding Disaster Vulnerability: Floods and Hurricanes. In K. A. Gould & T. L. Lewis (Eds.), *Twenty lessons in*

environmental sociology (pp. 127–141). New York, NY: Oxford University Press.

DMM CORE COURSE: FIELDWORK (COMMUNITY)

Semester: 1

Credits: 4

Course Outcomes (COs):

- CO1 Situate the disasters, risk and vulnerabilities within the geographical and socio-political structure of the society and its ecology.
- CO2 Identify problems in the society, analyze the causes, capacity and resources available to deal with those problems.
- CO3 Become familiar with the working of social welfare and disaster governance agencies in the society.
- CO4 Use technology to map the geophysical locations to identify disaster risk propensity as part of making disaster plans.
- CO5 Organize and lead community camps.
- CO6 Implement community intervention program/ project based on community learning.
- CO7 Develop skill in documentation and writing reports.
- CO8 Make visual and oral presentations based on social analysis and projects undertaken.

Components of Ist Semester Fieldwork:

- Observation visits & interactions with experts
- Community Camp
- Community field work

Field work preparation: workshop will be conducted to discuss self reflexive field work practices. Students will be prepared to critically understand the socio-political constitution of 'field;' The power structure inherent in interactive spaces- between students and the community and between the community members will be discussed. Ethical dilemmas involved in practice situations, listening skills, and participatory approaches of problem identification and analysis will be part of field work training.

Community Profile: Using the skills developed from Research Methodology and the theoretical perspectives, the students are to prepare a community

profile of the community where they conduct the camp. Community Profile will include history of the community, the social life, culture and practices of the community; environmental and geographical location; livelihood and economic conditions; education; health; infrastructural facilities; governance and politics; problems and capacities of the community.

Action projects: Students will be split into teams and each team should take up a social issue and execute a small project to tackle any aspect of this social issue.

Fieldwork Report & Presentation: As part of the fieldwork conducted the student should mandatorily submit a report and do a presentation about the work undertaken.

References

- Atkinson Paul and Amanda Coffey, Sarah Delmont et.al. (2001). Handbook of Ethnography. London: Sage.
- Carol A. Bailey. (2007). A Guide to Qualitative Field Research, Sage
- Dynes, Sarah and Terry Williams. (2018). On Ethnography. US: Wiley.
- Fook, J., and Gardner, F. (2007). Practicing Critical Reflection: A resource handbook. Maidenhead: Open University Press
- Iain Hay and Meghan Cope eds. (2021) Qualitative Research Methods in Human Geography, OUP
- Kothari, C.R. (2004). *Research methodology: methods and techniques*. New Age International (P) Limited Publishers.
- Newman, W.L. (2014). *Social research methods: qualitative and quantitative approaches*. Pearson Education Ltd.
- Newman, W.L. (2014). *Social research methods: qualitative and quantitative approaches*. Pearson Education Ltd.
- Nicholas Clifford, Shaun French, Gill Valentine (2003) Key Methods in Geography, Sage

Oommen, T. K. (2007). *Knowledge and Society: Situating Sociology and Social Anthropology*, Revised Edition. New Delhi: OUP.

Singh, A.K. (2016). *Tests, measurements and research methods in behavioral sciences*. Bharati Bhavan

Walliman, N. (2011). *Research Methods: The basics*. Routledge.

Yip, K. S. (2006). Self-reflection in reflective practice: A note of caution. *British Journal of Social Work*, 36, 777-788

DISCIPLINE CORE COURSE: INTRODUCTION TO PSYCHOLOGICAL PROCESSES

Semester: 1

Credits: 4

Course Outcomes (COs)

- CO9 Understand and familiarize the fundamental psychological concepts, operations and functions.
- CO10 Understand the theories underlying core psychological processes such as learning, memory, intelligence etc.
- CO11 Enable the learner to apply the theories of psychological aspects in their daily living as well as extent its application in disaster management.
- CO12 Develop an understanding about different research approaches in psychology

Module 1: Introduction to psychology and research methods

Basic ideas and concepts, different approaches, contemporary perspectives on behaviour, experimental and non-experimental research methods, applications of psychology to different domains

Module 2: Attention, perception and motivation

Attention processes- factors, selective attention, perceptual set, perceptual processing, organisation and constancies, perceptual learning, time perception, culture and perception; Motivation- Types of motives, hierarchy of motives, role of motivation in disaster affected areas.

Module 3: Conditioning and learning

Classical conditioning-processes-basic principles-neural basis, Operant conditioning-operations-principles, observational learning-principles, cognitive learning theory, Application of learning principles in disaster management

Module 4: Memory, language and thinking

Memory- influential views, stages, forgetting-theories, processes, brain and memory, chunking, mnemonics, Language- psycholinguistics, levels of language analysis, language-thought Thinking-processes, decision making-processes of decision making, heuristics, errors

Module 5: Intelligence, problem solving and decision making

Intelligence- contemporary theories, emotional intelligence, social intelligence; effective problem solving-methods, factors affecting problem solving; decision making-process, rules of thumb, escalation of commitment.

References

Baron, R.A., & Misra, G (2015). *Psychology* (5th ed), Pearson education

Ciccarelli, K.S., White, J.N., & Misra, G. (2022). *Psychology* (6thed). Pearson

Coon, D., & Mitterer, O. J. (2010). *Introduction to Psychology: Gateway to Mind and Behavior* (12thed), Cengage Learning

Koen, L. (2008). *Cognitive Science*. Sage Publications

DISCIPLINE CORE COURSE: ENVIRONMENTAL PSYCHOLOGY

Semester: 1

Credits: 4

Course Outcomes (COs)

- CO1 Understand the interactional relationships between environment and behavior.
- CO2 Analyze the nature, scope and basic concepts of environmental psychology.
- CO3 Understand environmental influences and its practical implications to the study of man- environment relationship.
- CO4 Apply the theoretical perspectives of environmental issues to reduce stress and crowding concerns related to disasters.
- CO5 Analyze case studies and interventions in the area of environmental psychology, by using relevant concepts, theories and methods.
- CO6 Identify the capacities to perform a basic research, practice or policy work in the field of environmental psychology.

Module 1- Environmental Psychology- History, Scope and Methods

- Introduction- history- current scope and characteristics
- Theories and psychological approaches to environment
- Environmental psychology and psychological tradition
- Main research methods

Module 2- Concepts in Environmental Psychology

- Environmental perception- factors affecting- nature and characteristics
- Environmental cognition- nature and cognitive mapping
- Environmental attitudes and appraisals
- Personal space- nature , functions and determinants- consequences of personal space invasion
- Territoriality- types and functions, territoriality and aggression
- Crowding- Nature and characteristics, features, causes and effects of crowding on animals and human beings- crowding and environmental design- density and social behavior

- Privacy - Privacy and Human Behaviour, Privacy and Environmental Design

Module 3- Environmental Stress, Disasters and Behavior

- Stress- Nature and characteristics, concept, Theoretical perspectives, psychology of stress, measuring stress, role of stress in understanding organism-environment relationship
- Types of stresses and stressors- natural disasters, technological catastrophe, noise and air pollution
- Perception and psychological effects of disasters- social behavior
- Solution approaches: strategies for reducing stress

Module 4- Psycho-educational aspects of environmental protection and assessment

- Environmental Conservation- Environmental education and laws of environmental protection.
- Changing Attitude to protect the Environment, Prompts and Reinforcement Techniques

References

- Baer, D.M. & Pinkston, E.M. (1997). *Environment and behaviour*. Westview press.
- Bechtel R.B., & Churchman, A. (2002). *A handbook of environmental psychology*. John Wiley and Sons.
- Bechtel, R. B. (1997). *Environment and behaviour – An introduction*. Sage Publications.
- Bell, P. A., Greene, T. C., Fisher, J. D. and Baum, A. (2001). *Environmental psychology* (Vth Edition). Wadsworth Group / Thomson learning, 10 Davis Drive Belmont CA.
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- Bhattacharya, S. (2008). *Environmental psychology*. Global Vision Publishing.

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- Cassidy, T. (1997). *Environmental psychology – Behaviour and experience in context*. Psychology Press.
- Clayton, S.D. (2012). *The oxford handbook of environmental and conservation psychology*. OUP USA.
- Gifford, R. (2007). *Environmental psychology: Principles and practice*. Optimal Books.
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- Ittelson W. H., Proshansky, H. M., Rilvin, E. G., Winkel, G. H., & Dempsey, D. (1974). *An introduction to environmental psychology*. Holt Rinehart and Winston.
- Jain, U. (1987). *The psychological consequences of crowding*. Sage.
- Koger, S.M., & Winter, D.D.N. (2011). *The psychology of environmental problems: Psychology for sustainability*. Taylor and Francis group.
- Malohotra, N.K. (2007). *Environmental psychology: Principles and practices*. Sumit Enterprices.
- Mohanty, B. and Misra, S. (2017). *A text book on environmental psychology*. Krupajala Books.
- Moors, R.H. (1986). *Human concept: Environmental determinants of behaviour*. John Willey & Sons.
- Nagar, D. (2006). *Environmental psychology*. Concept Publishing Co.
- Nickerson, R.S. (2003). *Psychology and environment change*. Lawrence Erlbaum Associates.
- Saari, C. (2002). *The environment: Its role in psychosocial functioning and psychotherapy*. Princeton University Press.

- Steg, L., & De Groot, J,I,M. (2019). *Environmental psychology: An introduction*. John Wiley and Sons.
- Steg, L., Van Den Berg, A.E., & De Groot, J,I,M. (2013). *Environmental psychology: An introduction*. British Psychological Society and John Wiley and Sons.
- Stokols, D. and Atmann, I. (Eds) (1987). *Handbook of environmental psychology*. Wiley.
- Upadhyaya, A. (2009). *Environmental psychology*. Shree publishers and distributors.
- Veitch, R., & Arkkelin, D. (1995). *Environmental psychology: An interdisciplinary perspective*. Practice-Hall.
- Walsh, W.B., Craik, K.H., & Price, R.H. (2000). *Person-environment psychology: New directions and perspectives*. 2nd Edition. Lawrence Erlbaum Associates.
- Winter, D. D., & Koger, S. (2004). *The psychology of environmental problems* (2nd ed.). Lawrence Erlbaum Associates.

CROSS DISCIPLINARY CORE: AN INTRODUCTION TO GEOSPATIAL TECHNOLOGY

Semester: 1

Credits: 4

Course Outcomes (COs)

- CO1 Understand the principles of geospatial technology
- CO2 Create and customise various spatial thematic layers
- CO3 Apply geospatial technology tools and techniques at the basic and advanced level
- CO4 Explore the different real world application areas of geospatial technology

Course Content

Module 1: Map Basics

Define Map – importance of Map; Basic mapping principles - scale, Map projections and coordinate systems; Data representation and Map symbolization - colours and patterns; map generalization; Elements of map design and layout Map.

Module 2: Fundamentals of GIS

Introduction to GIS-History of GIS - Component of GIS; Geographic data models-Raster and Vector data, Metadata, Networks, topology, Non-Spatial data; Fundamental concepts in Remote Sensing-EMR-Remote Sensing Platforms-Data acquisition-resolution of remote sensing data; Interpretation of Remote Sensing Data

Module 3: GIS Operations and its Importance

Geo-referencing – Database Creation – Data vectorization and editing - Add XY Data - Buffer-Merge – Split – Update - Queries - Field Calculator Operations –Measurements - Summary Statistics – Clip - Grid Preparation – Update – Erase –Qfield data collection - Adding GeoTag Photo - Interpolation -thematic map preparation; Map layout Design

Module 4: Fundamental Concepts of Remote Sensing

History of Remote Sensing – Electromagnetic Energy – Characteristics of Electromagnetic spectral regions – Energy interaction with earth surface features – spectral response of natural earth surface features – Sensor system used in remote sensing – resolution of remote sensing data - Earth Observation Satellites – weather and marine conservation satellites

Module 5: Digital Image Processing and Application

Sources of Spatial Data –Image Rectification – Image Enhancement – Band Combination – Image Classification – Index calculation – Thermal image processing – DEM data analysis – Applications of remote sensing data in disaster management.

Readings

Fundamentals of Remote Sensing, A Canada Centre for Remote Sensing Tutorial, Natural Resources, Canada
(https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/earthsciences/pdf/resource/tutor/fundam/pdf/fundamentals_e.pdf)

<https://gisenglish.geojamal.com/2019/04/qgis-34-training-manual-read-and.html>

<https://www.qgis.org/en/site/>

Jonathan E. Campbell, Michael Shin (2012), Geographic Information System Basics, <http://lardbucket.org>

Kang-Tsung Chang (2018), Introduction to Geographical Information Systems, McGraw Hill Education.

Michael N. Demers (2009), Fundamentals of Information Systems, Fourth Edition, John Wiley & Sons, Inc

P.S Roy, R.S Dwivedi and Vijayan D(), Remote Sensing Applications, National Remote Sensing Centre

https://www.nrsc.gov.in/sites/default/files/pdf/ebooks/Chap_7_Geo_sciences.pdf

Pradip Kumar Guha (2013), Remote Sensing for the beginner, Third Edition, East-West Press, New Delhi.



**SREE SANKARACHARYA
UNIVERSITY OF SANSKRIT,
KALADY**

Project Mode PG Programme

**Multidisciplinary Dual Main Master's in
Disaster Management and Mitigation**

(Associating Disciplines: Geography, Psychology, Sociology
and Social Work)

Sanctioned by
Ministry of Higher Education, Government of Kerala

**Programme Regulations
Programme Structure and Syllabi**

Programme Highlights

- **A Multidisciplinary Innovative PG Programme**
 - **Self- Sustaining Mode**
- **Fast emerging academic field with Cross Disciplinary Knowledge**
 - **Minimum Credit requirement Is 92**
 - **Intake – 40 Seats**
 - **Dual Main Programme ensuring equivalency with other Universities**
- **Awarding Four Separate Degrees in a Single Programme**
 - **MSc In Geography and DMM**
 - **MSc In Psychology and DMM**
 - **MA In Sociology and DMM**
 - **Master of Social Work and DMM**
- **Fieldwork in all semesters for ground experience**
- **Internships**

MA in SOCIOLOGY AND DISASTER MANAGEMENT AND MITIGATION (DMM)

Programme Outcomes (POs) of SSUS for PG Programmes

PO 1 Critical Thinking: Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.

PO 2 Communication: Listen, read, comprehend, speak and write clearly and effectively in person and through electronic media in English/regional language/language of the discipline and exhibit sound domain knowledge including academic concepts and terminologies.

PO 3 Self-directed and Life-long Learning: Engage in independent and lifelong learning in the broadest context of socio-technological changes.

PO 4 Ethics: Understand different value systems including one's own, as also the moral dimensions of one's actions, and accept responsibility for it.

Programme Specific Outcomes (PSOs)

PSO 1. Understand the basic natural and social aspects concerning disasters and disaster management mechanisms. (PO3)

PSO 2. Analyse critically social and ecological vulnerabilities, hazards and resilience. (PO1)

PSO 3. Critically analyse and apply existing global and national level frameworks and policies in disaster risk reduction and mitigation. (PO1)

PSO 4. Engage and develop participatory community-based risk reduction plan thereby empowering the communities. (PO1)

PSO 5. Demonstrate competence in using technology for disaster management and mitigation. (PO2)

PSO 6. Comprehend fundamental concepts and theories in acquiring skills for sociological imagination and critical thinking (PO 1)

PSO 7. Study research methods and methodologies in understanding social realities in the context of hazards, disasters and risks (PO 2, PO3)

PSO 8. Achieve critical sensibility on disasters and its social, economic and political impact. (PO 1, PO 3, PO 4)

PSO 9. Exhibit oral and written communication skills in disseminating sociological knowledge. (PO 2)

PSO 10. Enhance skills in applying sociology and disaster management to increase employability (PO 3)

PSO 11. Illustrate how broader concepts in the field of sociology, such as social inequality, manifest themselves in disaster (PO 3, PO 4)

PROGRAMME STRUCTURE
(Total Minimum Credits: 92)

SEMESTER I

Sl. No	Course	Discipline	Core/Elective	Credits	No. of Students	Hours/ Week
1	Understanding Disasters	DMM	Core	4	40	4
2	Classical Theoretical Tradition in Sociology	Sociology	Core	4	10+15=25	4
3	Disaster and Society	DMM	Core	4	40	4
4	Geo- Spatial Technologies for DMM	Geography	Cross Disciplinary Core- Geography	4	40	4
5	Environmental Sociology	Sociology	Core	4	10+15=25	4
6	Fieldwork (Community)	DMM	Core	4	40	10 days (12hrs x 10 = 120hrs)
7	Total Credits			24		

SEMESTER II

Sl. No	Course	Discipline	Core/Elective	Credits	No. of Students	Hours/ Week
1	Disaster Governance	DMM	Core	4	40	4
2	Advanced Theoretical Perspectives in Sociology	Sociology	Core	4	10+15=25	4
3	Community Based Risk Reduction	Social Work	Cross Disciplinary Core- SW	4	40	4
4	Multi-disciplinary Elective	Sanskrit	Elective	4	40	4
5	Fieldwork (PRA Camp)	DMM	Core	4	40	10 days (12hrs x 10 = 120hrs)

6	Sociology of Change, Development and Sustainability	DMM	Skill Course Cross-Disciplinary Core-Sociology	4	40	15 hrs/Sem
7	Total Credits			24		

SEMESTER III

Sl. No	Course	Discipline	Core/Elective	Credits	No. of Students	Hours/Week
1	Methodologies in Disaster Management Research	DMM	Core	4	40	4
2	Urbanisation and Spatial Transformation	Sociology	Core	4	10+15=25	4
3	Stress and Coping	Psychology	Cross Disciplinary Core-Psychology	4	40	4
4	Multi-disciplinary Elective	Any Department	Elective	4	40	4
5	Fieldwork- Discipline Specific	Sociology	Core	4	10+15=25	10 days (12hrs x 10 = 120hrs)
6	Psychological First Aid	DMM	Skill Course	1	40	15hrs/Sem
7	Life Saving Skills	DMM	Skill Course	1	40	15 hrs/Sem
8	Total Credits			22		

SEMESTER IV

Sl. No	Course	Discipline	Core/Elective	Credits	No. of Students	Hours/Week
1	Project Planning and Administration for Disaster Risk Reduction	DMM	Core	4	40	4
2	1. Disaster Finance and Humanitarian aid 2. Disaster Communication 3. Disaster and Geopolitics 4. Public Health and Mental Health	DMM	Elective	4	40	4
3	Science, Technology and Society	Sociology	Core	4	10+15=25	4
4	Dissertation	DMM	Core	6	40	6
5	Internship	DMM	Core	4	40	4
6	Total Credits			22		

PROGRAMME SYLLABI

DMM CORE COURSE: UNDERSTANDING DISASTERS AND DISASTER MANAGEMENT

Semester: 1

Credits: 4

Course Outcomes (COs)

- Understand the basic concepts of disaster and characteristics of disasters
- Recognize the importance of environment for understanding disasters and disaster management
- Evaluate various physical elements and forces acting on the surface of the earth.
- Examine various process and drivers behind the occurrence of disasters
- Analyse the impacts of disasters in various sectors in different context
- Develop skills in identification and preparation for vulnerability and risk mapping

Module 1: Basic Concepts of Disaster and Disaster Management

1.1 Understanding and defining disaster: Acts of God, Acts of Nature, Disasters as joint effects of nature and society, Injustice and human vulnerability to disasters.

1.2 Disasters in the context of Physical and Environmental Vulnerability

1.3 Classification of Disasters; Disaster cycle

1.4 Need for disaster management in today's world.

1.4.1 Disaster management in India

1.4.2 Disaster management in Kerala

1.5 Basic steps in Disaster Management and Mitigation

Essential Reading

Quarantelli, E L (1998) What is a Disaster? Perspectives on the Question. United Kingdom, Routledge.

Perry, Ronald W., and Quarantelli, Enrico Louis (2005) What is a Disaster? New Answers to Old Questions. United Kingdom, Xlibris.

Hewitt K. (2017) *Regions of Risk: A Geographical Introduction to Disasters*. Taylor and Francis. ISBN: 9781317894162, 1317894162

Jones, L. (2019). *The big ones: How natural disasters have shaped us (and what we can do about them)*. Anchor.

Bankoff B (2023) Time is of the essence: Disasters, Vulnerability and History. *International Journal of Mass Emergencies & Disasters*. Volume 22, Issue 3.
<https://doi.org/10.1177/028072700402200303>

Vasilescu L, A Khan and H Khan (2008) *DISASTER MANAGEMENT CYCLE – A THEORETICAL APPROACH*. Editura Universitaria Craiova. (Free down load:
<https://www.cceol.com/search/article-detail?id=147294>)

Collins, A.E. (2009). *Disaster and Development* (1st ed.). Routledge.
<https://doi.org/10.4324/9780203879238>

Taori, K. (2005). *Disaster Management Through Panchayati Raj*. India: Concept Publishing Company.

Joice K. Joseph, Dev Anand, P. Prajeesh, Anand Zacharias, Anu George Varghese, A.P. Pradeepkumar, K.R. Baiju, (2020) Community resilience mechanism in an unexpected extreme weather event: An analysis of the Kerala floods of 2018, India, *International Journal of Disaster Risk Reduction*, Volume 49, Science Direct. ISSN 2212-4209,
<https://doi.org/10.1016/j.ijdrr.2020.101741>.

Module 2: Natural Hazards and physical environment

2.1 Defining natural phenomena and natural hazards - physical forces acting on the surface of the earth (endogenic and exogenic forces)

2.2 Ecosystem and its components - Ecosystem services - Biodiversity

2.3 Hazards in different geographical settings: in mountains and coastal environment

2.4 Contextualizing climate change, extreme events and natural hazards

Essential Reading

Schidegger, A. E. (2012). *Theoretical Geomorphology*. Germany: Springer Berlin Heidelberg.

- Meli, P., Vieli, L., Spirito, F., Reyes-Riveros, R., Gonzalez-Suhr, C., & Altamirano, A. (2023). The importance of considering human well-being to understand social preferences of ecosystem services. *Journal for Nature Conservation*, 126344.
- Takacs, V., & O'Brien, C. D. (2023). Trends and gaps in biodiversity and ecosystem services research: A text mining approach. *Ambio*, 52(1), 81-94.
- Melaku, A., Ivars, J. P., & Sahle, M. (2023). The state-of-the-art and future research directions on sacred forests and ecosystem services. *Environmental Management*, 1-14.
- Sandhu, H., Zhang, W., Meinzen-Dick, R., ElDidi, H., Perveen, S., Sharma, J., ... & Priyadarshini, P. (2023). Valuing ecosystem services provided by land commons in India: implications for research and policy. *Environmental Research Letters*.
- Zimmermann, M., & Keiler, M. (2015). International frameworks for disaster risk reduction: Useful guidance for sustainable mountain development? *Mountain Research and Development*, 35(2), 195-202.
- Coratza, P., & De Waele, J. (2012). Geomorphosites and natural hazards: teaching the importance of geomorphology in society. *Geoheritage*, 4, 195-203.
- Hewitt, K. (2004). Geomorphic hazards in mountain environments. *Mountain geomorphology*, 187-218.
- Klein, N. (2015). *This changes everything: Capitalism vs. the climate*. Simon and Schuster.
- Douglas, K. (2021). The nature fix. *New Scientist*, 249(3327), 36-40.
- Pelling M. 2010. *Adaptations to Climate Change: From Resilience to Transformation*. Taylor & Francis. ISBN: 9781134022014, 1134022018
- Srinivas, H., & Nakagawa, Y. (2008). Environmental implications for disaster preparedness: lessons learnt from the Indian Ocean Tsunami. *Journal of environmental management*, 89(1), 4-13.

Module 3: Natural process and disasters

3.1 Spatial distribution of disasters- Drivers and causes, salient features - History of major disaster events – Global and Local

3.2 Geological disasters (Earthquake, landslide, tsunami)

3.3 Climatological disasters (flood, drought, cyclones; lightning)

3.4 Hydrological disasters (Flood, GLOF, avalanche)

3.5 Major natural disasters: Case studies

Essential Reading

Hewitt K. 2017. Regions of Risk: A Geographical Introduction to Disasters. Taylor and Francis.

ISBN: 9781317894162, 1317894162

Rodriguez H, Joseph E. Trainor, William Donner (2017) Handbook of Disaster Research. Springer. ISBN: 9783319632544, 331963254X

Jones LM. The Big Ones: How Natural Disasters Have Shaped Us (and what We Can Do about Them). Doubleday Publishers. ISBN: 9780385542708, 0385542704

Scott, R., MacDonald, G., Horn, W., Bolt, B. (1977). Geological Hazards: Earthquakes - Tsunamis - Volcanoes - Avalanches - Landslides - Floods. Germany: Springer New York.

Wenzel F and J Zschau (2013). Early Warning for Geological Disasters: Scientific Methods and Current Practice. Germany: Springer Berlin Heidelberg

Okuyama, Y., & Sahin, S. (2009). Impact estimation of disasters: a global aggregate for 1960 to 2007. World Bank Policy research working paper, (4963).

Thomas, V., Albert, J. R. G., & Hepburn, C. (2014). Contributors to the frequency of intense climate disasters in Asia-Pacific countries. Climatic Change, 126, 381-398.

Pfister C and C Mauch (Ed) (2009) Natural Disasters, Cultural Responses: Case Studies Toward a Global Environmental History. United Kingdom: Lexington Books.

Module 4: Human induced disasters

4.1 Human-induced disasters: Causative factors (Environmental degradation enhancing pre-existing environmental vulnerabilities)

4.2 Technological/human-made disasters (industrial, nuclear, transportation, dam failure, stampede, terrorism, conflicts: war, cyber-attacks)

4.3 Chemical disasters and biological disasters; (chemical leaks and explosions, epidemic/pandemic, pest attacks/locusts/insect infestations)

4.4 Human-induced disasters: Case studies

Essential Reading

Wilson, E. O. (2017). *Half-Earth: Our Planet's Fight for Life*. United Kingdom: WW Norton.

Cutter, S. L. (1996). Vulnerability to environmental hazards. *Progress in human geography*, 20(4), 529-539. (Free download)

Turner, Alan Keith (2018). "Social and environmental impacts of landslides." *Innovative Infrastructure Solutions* 3. 1-25.

Sharma, J., & Ravindranath, N. H. (2019). Applying IPCC 2014 framework for hazard-specific vulnerability assessment under climate change. *Environmental Research Communications*, 1(5), 051004.

Dave R K (2018) *Disaster Management in India: Challenges and Strategies*. Prowess Publishing.

Perry, John. *Nuclear Weapons and the Environment: An Ecological Case for Non-proliferation*. Lexington Books, 2021.

Biswas, Asit K. (2004). "Dams: cornucopia or disaster?" *International Journal of Water Resources Development* 20.1 3-14.

Salazar, Mary K., and Betty Kelman. (2002). "Planning for biological disasters: Occupational Health Nurses as "First Responders". *AAOHN Journal* 50.4. 174-181.

Kumar, Jitendra. (2020). "Biological disaster management." *International Journal of Technical Research & Science* 5.7. 5-10.

Kondratyev, Kirill Ya, Alexei A. Grigoryev, and Costas A. Varotsos. (2002). *Environmental disasters: Anthropogenic and natural*. London, England: Springer.

Sriramachari, S. (2004). The Bhopal gas tragedy: An environmental disaster. *Current Science*, 86(7), 905-920.

Beigel, A., & Berren, M. R. (1985). Human-induced disasters. *Psychiatric Annals*, 15(3), 143-150.

Nibanupudi, H. K., Gupta, A. K., & Rawat, P. K. (2015). Mitigating climatic and human induced disaster risks through ecosystem resilience: Harmonizing built and natural environments in the HKH region. *Mountain hazards and disaster risk reduction*, 139-157.

Ghassemi, F., Jakeman, A. J., & Nix, H. A. (1995). *Salinisation of land and water resources: human causes, extent, management and case studies*. CAB international.

Ajin, R. S., Nandakumar, D., Rajaneesh, A. et al. (2022). The tale of three landslides in the Western Ghats, India: lessons to be learnt. *Geoenviron Disasters* 9, 16

<https://doi.org/10.1186/s40677-022-00218-1>

Module 5: Activities and Processes in Disaster Management and Mitigation

5.1 Disaster Preparedness – risk assessment, emergency plan creation, emergency response teams

5.2 Response – saving lives, reducing health impacts, normalising post-disaster situation

5.3 Recovery – rebuild infrastructure, provide assistance to the affected

5.4 Mitigation – actions to reduce future disasters

Essential Reading

Pelling M. (2010). *Adaptations to Climate Change: From Resilience to Transformation*. Taylor & Francis. ISBN: 9781134022014, 1134022018

UN (2022). *United Nations Global Assessment Report on Disaster Risk Reduction – Our World at Risk: Transforming Governance for a Resilient Future*. Downloadable at: www.undrr.org/GAR2022

COLLINS, L. R. (2023). *DISASTER MANAGEMENT AND PREPAREDNESS*. Taylor & Francis. CRC Press.

Rubin, O., Dahlberg, R. (2017). *A Dictionary of Disaster Management*. United Kingdom: OUP Oxford.

Kiefer, J. J., Jerolleman, A. (2012). *Natural Hazard Mitigation*. United Kingdom: Taylor & Francis.

Suggested Reading

André van Amstel, Md. Nazrul Islam (Ed) (2021). India: Climate Change Impacts, Mitigation and Adaptation in Developing Countries. Springer International Publishing.

DHAMEJA, A., MEDURY, U., SAHNI, P. (2018). DISASTER MITIGATION: EXPERIENCES AND REFLECTIONS. India: PHI Learning.

Maskrey, A. (1989). Disaster Mitigation: A Community Based Approach. United Kingdom: Oxfam.

Esteban M, T Shibayama and H Takagi (Ed) (2015). Handbook of Coastal Disaster Mitigation for Engineers and Planners. Netherlands: Elsevier Science.

Aaltola, M. (2012). Theoretical Departures to Disasters and Emergencies. In: Attinà, F. (eds) The Politics and Policies of Relief, Aid and Reconstruction. Palgrave Macmillan, London.
https://doi.org/10.1057/9781137026736_4 (Free download)

Quarantelli, E. L. (1989). Conceptualizing disasters from a sociological perspective. International Journal of Mass Emergencies & Disasters, 7(3), 243-251.

Wiest, R. E., Mocellin, J. S., & Motsisi, D. T. (1994). The needs of women in disasters and emergencies (pp. 12-6). Winnipeg, MB, Canada: Disaster Research Institute, University of Manitoba.

Britton, N. R. (1986). Developing an understanding of disaster. The Australian and New Zealand Journal of Sociology, 22(2), 254-271.

Nan, Y., Li, Y., Liu, K., Dai, B., Lai, J., & Zhang, Y. (2023). Global earthquake disaster and emergency response in 2021. In Advances in Civil Engineering: Structural Seismic Resistance, Monitoring and Detection (pp. 606-611). CRC Press.

Roy, P., Pal, S. C., Chakraborty, R., Chowdhuri, I., Saha, A., & Shit, M. (2023). Effects of climate change and sea-level rise on coastal habitat: Vulnerability assessment, adaptation strategies and policy recommendations. Journal of Environmental Management, 330, 117187.

Kumar, S., David Raj, A., Kalambukattu, J. G., & Chatterjee, U. (2023). Climate Change Impact on Land Degradation and Soil Erosion in Hilly and Mountainous Landscape: Sustainability Issues and Adaptation Strategies. In Ecological Footprints of Climate Change: Adaptive Approaches and Sustainability (pp. 119-155). Cham: Springer International Publishing.

Kamal, M., Zahid, D., & Malak, M. A. (2023). Why Is Women's Leadership Important For Enhancing Disaster Resilience To Natural Perturbations. Coastal Disaster Risk Management in Bangladesh: Vulnerability and Resilience.

Ghosh, A., Sen, A., & Frietsch, M. (2023). "What is a 'very severe cyclone' please"? Uncovering knowledge and communication gaps in climate resilience realities. International Journal of Disaster Risk Reduction, 86, 103499.

Anwana, E. O., & Owojori, O. M. (2023). Analysis of Flooding Vulnerability in Informal Settlements Literature: Mapping and Research Agenda. Social Sciences, 12(1), 40.

Mikulecký, P., Punčochářová, A., Babič, F., Bureš, V., Čech, P., Husáková, M., ... & Zanker, M. (2023). Dealing with risks associated with tsunamis using indigenous knowledge approaches. International Journal of Disaster Risk Reduction, 103534.

Carmona, R., Reed, G., Thorsell, S., MacDonald, J. P., Dorrough, D. S., Rai, T. B., & Sanago, G. (2023). A New Partnership with Indigenous Peoples? An Analysis of the Intergovernmental Panel on Climate Change's Sixth Assessment Report. researchsquare.com (Free download)

Al-Husain, R. (2023). Epidemiological disaster management: Literature survey and analysis. International Journal of Innovative Research and Scientific Studies, 6(1), 49-63.

Botzen, W. W., Deschenes, O., & Sanders, M. (2019). The economic impacts of natural disasters: A review of models and empirical studies. Review of Environmental Economics and Policy.

Guha-Sapir, D., Santos, I., & Borde, A. (Eds.). (2013). The economic impacts of natural disasters. Oxford University Press.

Other Resources from WWW:

Ramsar Convention. (2017). Wetlands: A natural safeguard against disasters.

<https://www.ramsar.org/document/resolution-xii13-wetlands-and-disaster-risk-reduction>

United Nations Office for Disaster Risk Reduction. (n.d.). Disaster risk reduction & disaster risk management. Sendai Framework: <https://www.undrr.org/implementing-sendai-framework>

World Meteorological Organization. (2021). WMO atlas of mortality and economic losses from weather, climate and water extremes. <https://public.wmo.int/en>

World Bank: <https://www.worldbank.org/en/topic/disasterriskmanagement>

Discipline Core : Classical Theoretical Tradition in Sociology

Semester: 1

Credits: 4

Course Outcomes (COs):

1. Understand the historical roots and emergence of sociology.
2. Understand the contributions of classical thinkers to generate interest in the discipline.
3. Enable understanding of classical theorists through reading their original texts.
4. Exhibit oral and written communication skills in disseminating sociological knowledge based on original works of classical thinkers.

Module 1: Historical Emergence of Sociology and the Positivist Tradition

- 1.1. Intellectual Context - Renaissance to Enlightenment to Social Philosophy of Saint Simon
- 1.2. Social, Political and Economic Context – Revolutions
- 1.3. Sociology as a science – Comte, and Spencer
- 1.4. Contributions of Harriet Martineau and W.E.B. Du Bois

Essential Readings:

- Swingewood, A. 2000. A Short History of Sociological Thought -Third Edition. UK: Palgrave Macmillan.
- Gordon, S. 1995. The History and Philosophy of Social Science. London: Routledge.
- Adams, B. N., & Sydie, R. A. 2002. Classical sociological theory. California: Sage.

Module 2: Functionalist Tradition in Sociology- Emile Durkheim

- 2.1 Emergence of Sociology as an academic discipline: subject matter; methodology
- 2.2 Views on Sociological Method – Rules of Sociological Methods
- 2.3 Durkheim as Functionalist – The Division of Labour & Elementary Forms of Religious Life – Social Organisation- Stratification- Solidarity
- 2.4 Empirical approach - Theory of Suicide

Essential Readings:

Hughes, J. A., Wes, S. W., & Martin, P. J. (2003). Understanding classical sociology, Marx, Weber, Durkheim. New Delhi: Sage.

Durkheim, E. 1982. The Rules of Sociological Method. London: Macmillan.

Durkheim, E. 1933. The Division of Labour in Society. Glencoe: The Free Press.

Durkheim, E. and M. Mauss. 1969. Primitive Classifications. London: Cohen & West.

Module 3: The Marxist Tradition in Sociology- Karl Marx

3.1 Conception of Society - Dialectical and Historical Materialism; Social structure & Economic determinism; Formation of Social Classes

3.2 Capitalism, Commodity production, Labour theory of value, alienation

3.3 Theory of social change – Ideology, Class Consciousness, Class Struggle

Essential Readings:

Marx, K. 1954. Capital - Vol. I. Moscow: Progress Publishers. (Chapter 1,10 and 14).

Stones, R. 1998. Key sociological thinkers. Hampshire: Macmillan.

Module 4: Post- Positivism- Max Weber

4.1 Methodological Individualism – Sociology as an interpretative Science, Social Action, Ideal Type,

4.2 Value Neutrality and Causality

4.3 Rationality and Modernity – Rationalization

4.4 Theory of Power and Authority - Bureaucracy

4.5 Theory of stratification

Essential Readings:

Weber, M. 1978. Economy and Society: An outline interpretative sociology (edited by G.Roth and C. Wittich) - Vol. 1. Berkeley: University of California Press. (Part-I, Chapters 1, 2).

Weber, M. 2002. The Protestant Ethic and the Spirit of Capital. Los Angeles: Blackwell Publishers. Weber, M. 1949. The Methodology of the Social Sciences. New York: Free Press.

Suggested Readings:

- Abraham, Francis and Morgan Henry John, 2010, Sociological Thought, MacMillan.
- Abrams, P. 1968. The Origins of British Sociology. Chicago: University of Chicago Press.
- Beteille, Andre.2002. Sociology, New Delhi, Oxford University Collins, Randall. Theoretical Sociology. Jaipur: Rawat, 1997.
- Durkheim, E. 1982. The Rules of Sociological Method. London: Macmillan.
- Durkheim, E. 1933. The Division of Labour in Society. Glencoe: The Free Press.
- Durkheim, E. and M. Mauss. 1969. Primitive Classifications. London: Cohen & West.
- Haralambos M and Heald R.M.,2008, Sociology-Themes and Perspectives, Oxford University Press. Hunt F.Elgin and Colander C. David,2010, Social Science: An Introduction to the study of society, Dorling Kindersley India Pvt. Ltd,
- Macionis J.John,2006, Sociology, Pearson Education.
- Marx, K. 1964. Pre-capitalist Economic Formations. London: Lawrence and Wishart
- Marx, K. 1924. The Class Struggle in France (1848-1850). New York: New York Labour News.
- Marx, K. and F. Engels. 1976. The Manifesto of the Communist Party, in Marx & Engels Collected Works - Vol. 6. London: Lawrence and Wishart.
- Nisbet, R.A. 1967. The Sociological Tradition. London: Heinemann. Weber, M. 1949. The Methodology of the Social Sciences. New York: Free Press.
- Weber, M. 2002. The Protestant Ethic and the Spirit of Capital. Los Angeles: Blackwell Publishers

DMM Core : Disaster & Society

Semester: 1

Credits: 4

Course Outcomes (COs):

1. Understand Sociology as a scientific discipline and its theoretical approaches
2. Understand the social structure and transformations of Indian and Kerala society
3. Understand the framing of disasters through the lens of Sociology
4. Appraise how social structures influence disaster experience and think critically about how social dynamics shape the ways people and communities prepare for, face and recover from disaster

Module:1 The Study of Human Society

- 1.1. Emergence of Sociology as a Scientific Discipline; Nature & Scope
- 1.2. Sociological Perspective : Common Sense Vs Sociological Imagination; Units of Study, Methodological Orientations: Positivism, Humanism, Materialism
- 1.3. Theoretical Approaches - Classical Tradition, Structuralism, Functionalism, Structural-Functionalism, Conflict Perspectives, Critical Theory, Social Constructionism, Post Structural, Postmodern and Neo-Social Perspectives

Essential Reading

- Bottomore, T. B. (2010). *Sociology: A Guide to Problems and Literature*. United Kingdom: Routledge.
- Davis, K. (1963). *Human Society*. United Kingdom: Macmillan.
- Giddens, A., Sutton, P. W. (2017). *Sociology*. Germany: Wiley.
- Inkeles, A. (1964). *What is Sociology? An Introduction to the Discipline and Profession*. United States: Prentice-Hall.
- Oommen, T.K. & Venugopal C.N. (2018). *Sociology*. Delhi : Eastern Book Company.
- Mills, C. W. (2022). *The Sociological Imagination*. India: Aakar.

Timasheff, N. S. (1963). Sociological Theory: Its Nature and Growth. United States: Random House.

Module: 2 Social Structure, Process and Transformations

2.1. Basic Concepts : Society, Community, Association, Socialisation, Institution, Culture, Social groups, Social Stratification and Mobility, Social System, Social Structure, Social Problems and Social Change

2.2. Indian Context : Family and Kinship; Caste and Class; Economy and Society; Polity and Society; Education and Society; Urban, Peasant and Tribal Communities; Unity in Diversity

2.3. Kerala Context : Genealogy of Structural Changes in Kerala Society; Caste, Class and Religion; Family, Marriage and Gender; The Unique Kerala

Essential Reading

A.M. Shah. (1996). Social Structure and Change (vol. 4 & 5). New Delhi: Sage

Beteille, A. (2011). Caste, Class and Power. New Delhi: Oxford

M.N. Srinivas. 1997. Caste: its twentieth century avatar. New Delhi: Penguin

Oommen, T.K. & Venugopal C.N. (2018). Sociology. Delhi : Eastern Book Company.

Elamkulam P.N. Kunjan Pillai. 1970. Studies in Kerala History. Kottayam: National Book Stall.

Rathi Ramachandran. et.al. 2005. History of Medieval Kerala. New Delhi: Pragati Publications.

Raja Jayaraman. 1981. Caste and Class: dynamics of inequalities in Indian society. Delhi: Hindustan Publishing

Module:3 Sociology of Disaster

3.1. Disaster and Society - Disasters as a Social Phenomenon and Significance of Sociological Approach; The Hazards-Disaster Tradition; Human Ecology, Vulnerability, and Resilience; The Crisis Approach; Culture, Knowledge and Religious Interpretations of Disaster

3.2. Framing Disasters: Constructionist Theories - Weberian Political Sociology; Ulrich Beck - Risk Society; Anthony Giddens - The Consequences of Modernity;

3.3. The Social Science Disaster Paradigm; Environment, Development and Sustainability; Studying Future Disasters and Crises

3.4. Resilience and Disasters : Case Studies

Essential Reading

Donner, W. R. (2007). The Political Ecology of Disaster: An Analysis of Factors Influencing U.S. Tornado Fatalities and Injuries, 1998-2000. *Demography*, 44(3), 669–685. <http://www.jstor.org/stable/30053107>

Handbook of Disaster Research. (2017). Germany: Springer International Publishing. (Ch. 1,2, & 4)

Schutt, R.S. (2010). A Sociological Perspective on Disasters. In *Rebuilding Sustainable Communities for Children and Their Families After Disasters: A Global Survey*. (2010). United Kingdom: Cambridge Scholars.

Stallings, R. A. (2002). Weberian Political Sociology and Sociological Disaster Studies. *Sociological Forum*, 17(2), 281–305. <http://www.jstor.org/stable/3070327>

Module: 4 Disaster and Vulnerability Profile

4.1. Vulnerability Profile : Models of Vulnerabilities, Global to Local; Power, Human Rights and Disaster; The Political Ecology of Disaster Vulnerability

4.2. The Cultural Turn in Disaster: Culture and Social Construction, Culture as a Source of Resilience, Culture as a Source of Vulnerability

4.3. Race, Class, Religious affiliation, Caste, Ethnicity, Gender, Sexuality, Children, Youth and Elderly, Disability and Disaster Vulnerability

4.4. Social Capital in Disaster Research; Intersectionality Approach

Essential Reading

Baruah, M. (2023) *Slow disaster: Political ecology of hazards and everyday life in the Brahmaputra Valley, Assam*. London: Routledge, Taylor & Francis Group.

Cutter S, Boruff B, Shirley W (2003) Social vulnerability to environmental hazards. *Soc Sci Q* 84:242–261. <https://doi.org/10.1111/1540-6237.8402002>

Handbook of Disaster Research. (2017). Germany: Springer International Publishing. (Ch.6, 10-14)

The Routledge Handbook of Disaster Risk Reduction Including Climate Change Adaptation. (2020). United Kingdom: Taylor & Francis Group. (Ch.6, 13)

Handbook of Hazards and Disaster Risk Reduction. (2012). United Kingdom: Taylor & Francis. (Ch.3-4,6,8-10, 34-38)

Disaster Risk Reduction : Community Resilience and Responses. (2018). Germany : Palgrave Macmillan US

Suggested Reading

Alexander, D. A. (2005). An interpretation of disaster in terms of changes in culture, society and international relations. In R. W. Perry & E. L. Quarantelli (Eds.), What is a disaster: New answers to old questions (pp. 25–38). Philadelphia: Xlibris Publishers.

Amundsen, H. (2012). Illusions of resilience? Ecology and Society, 17(4), 1–19

Barton, A. H. (1969). Communities in disaster. New York, NY, USA: Doubleday.

Barton, A. H. (1989). Taxonomies of disaster and macrosocial theory. In G. A. Kreps (Ed.), Social structure and disaster (pp. 346–350). Newark, DE, USA: University of Delaware Press

Barton, A. H. (2005). Disaster and collective stress. In R. W. Perry & E. L. Quarantelli (Eds.), What is a disaster: New answers to old questions (pp. 125–152). Philadelphia: Xlibris Publishers.

Bates, F. L., & Peacock, W. G. (1993). Living conditions, disasters and development. Athens, GA, USA: University of Georgia Press

Bates, F. L., & Pelanda, C. (1994). An ecological approach to disasters. In R. Dynes & K. Tierney (Eds.), Disasters, collective behavior and social organization (pp. 145–159). Newark, DE, USA: University of Delaware Press

Berkes, F., & Ross, H. (2013). Community resilience. Society and Natural Resources, 26(1), 5–20.

Birkmann, J., Cardona, O., Carreno, M., Barbat, A., Pelling, M., Schneiderbauer, S., et al. (2014). Theoretical and conceptual framework for the assessment of vulnerability to natural hazards and climate change in Europe. In J. Birkmann, S. Kienberger, & D. Alexander (Eds.), Assessment of vulnerability to natural hazards (pp. 1–20). London: Elsevier.

- Boin, A. (2005). From crisis to disaster: Towards an integrative perspective. In R. W. Perry & E. L. Quarantelli (Eds.), *What is a disaster: New answers to old questions* (pp. 153–172). Philadelphia: Xlibris Publishers.
- Boin, A., Comfort, L., & Demchak, C. (2010). The rise of resilience. In L. Comfort, A. Boin, & C. Demchak (Eds.), *Designing resilience* (pp. 1–13). Pittsburgh: University of Pittsburgh Press.
- Bradshaw, S. (2014). Engendering development and disasters. *Disasters*, 30, 34–55.
- Britton, N. R. (2005). What's a word—Opening up the debate. In R. W. Perry & E. L. Quarantelli (Eds.), *What is a disaster: New answers to old questions* (pp. 60–78). Philadelphia: Xlibris Publishers.
- Buckle, P. (2005). Mandated definitions, local knowledge and complexity. In R. W. Perry & E. L. Quarantelli (Eds.), *What is a disaster: New answers to old questions* (pp. 173–200). Philadelphia: Xlibris Publishers.
- Carr, L. T. (1932). Disaster and the sequence-pattern concept of social change. *American Journal of Sociology*, 38, 207–218.
- Chakraborty, J., Collins, T., Montgomery, M., & Gri- neski, S. (2014). Social and spatial inequities in exposure to flood risk in Miami. *Florida, Natural Hazards Review*, 15(3), 152–157.
- Cisin, I. H., & Clark, W. B. (1962). The methodological challenge of disaster research. In G. Baker & D. Chapman (Eds.), *Man and society in disaster* (pp. 23– 54). New York, NY, USA: Basic Books.
- Clausen, L. (1992). Social differentiation and the long-term origin of disasters. *Natural Hazards*, 6, 181–190.
- Cutter, S., Ash, K., & Emrich, C. (2014). The geographies of community disaster resilience. *Global Environmental Change*, 29, 65–77.
- Drabek, T. E. (2013). *The human side of disaster* (2nd ed.). Boca Raton, FL, USA: CRC Press.
- Drabek, T. E., & McEntire, D. (2003). Emergent phenomena and the sociology of disaster. *Disaster Prevention and Management*, 12(2), 97–112.
- Dynes, R. R. (1998). Coming to terms with community disaster. In E. L. Quarantelli (Ed.), *What is a disaster: Perspectives on the question* (pp. 109–126). London: Routledge.

- Fischer, H. (2003). The critics corner: The sociology of disaster. *International Journal of Mass Emergencies and Disasters*, 21, 91–108.
- Fritz, C. E. (1961a). Disaster. In R. Merton & R. Nesbit (Eds.), *Contemporary social problems* (pp. 651–694). New York, NY, USA: Harcourt Publishers.
- Gaillard, J. C. (2010). Vulnerability, capacity and resilience. *Journal of International Development*, 22, 218–232
- <https://udspace.udel.edu/server/api/core/bitstreams/40a596ab-957b-40e7-8528-594479a1cf25/content> (This paper is an expansion of remarks presented as the inaugural Distinguished Lecture on Disaster and Risk at the Disaster Research Center, Department of Sociology and Criminal Justice, University of Delaware, Newark, 17 April 1997.)
- Jigyasu, R. (2005). Disaster: A reality or construct? In R. W. Perry & E. L. Quarantelli (Eds.), *What is a disaster: New answers to old questions* (pp. 49–59). Philadelphia: Xlibris Publishers.
- Kreps, G. A. (1984). Sociological Inquiry and Disaster Research. *Annual Review of Sociology*, 10, 309–330. <http://www.jstor.org/stable/2083178>
- Kreps, G. A. (1989). Disaster and the social order. In G. A. Kreps (Ed.), *Social structure and disaster* (pp. 31– 51). Newark, DE, USA: University of Delaware Press.
- Kreps, G. A. (1998). Disaster as systemic event and social catalyst. In E. L. Quarantelli (Ed.), *What is a disaster: Perspectives on the question* (pp. 31–55). London: Routledge.
- Lindell, M. K. (2013). Disaster studies. *Current Sociology Review*, 61(5–6), 797–825.
- Peacock, W., & Bates, F. L. (1987). Disasters and social change. In R. Dynes, B. De Marchi, & C. Pelanda (Eds.), *Sociology of disasters* (pp. 291–330). Milan, Italy: Franco Angeli.
- Peacock, W., & Ragsdale, A. K. (1997). Social systems, ecological networks and disasters. In W. Peacock, B. Morrow, & H. Gladwin (Eds.), *Hurricane Andrew* (pp. 20–35). New York, NY, USA: Routledge.
- Stallings, R. A. (2002). Weberian Political Sociology and Sociological Disaster Studies. *Sociological Forum*, 17(2), 281–305. <http://www.jstor.org/stable/3070327>
- Youngman, Nicole (2020) Understanding Disaster Vulnerability: Floods and Hurricanes. In K. A. Gould & T. L. Lewis (Eds.), *Twenty lessons in environmental sociology* (pp. 127–141). New York, NY: Oxford University Press.

Cross Disciplinary Core: An Introduction to Geospatial Technology

Semester 1

Credits: 4

Course Outcomes (COs)

CO1: Understand the principles of geospatial technology

CO2: Create and customise various spatial thematic layers

CO4: Apply geospatial technology tools and techniques at the basic and advanced level

CO5: Explore the different real world application areas of geospatial technology.

Module 1: Map Basics

Define Map – importance of Map; Basic mapping principles - scale, Map projections and coordinate systems; Data representation and Map symbolization - colours and patterns; map generalization; Elements of map design and layout Map;

Module 2: Fundamentals of GIS

Introduction to GIS-History of GIS - Component of GIS; Geographic data models-Raster and Vector data, Metadata, Networks, topology, Non-Spatial data; Fundamental concepts in Remote Sensing-EMR-Remote Sensing Platforms-Data acquisition-resolution of remote sensing data; Interpretation of Remote Sensing Data

Module 3: GIS Operations and its Importance

Geo-referencing – Database Creation – Data vectorization and editing - Add XY Data - Buffer-Merge – Split – Update - Queries - Field Calculator Operations –Measurements - Summary Statistics – Clip - Grid Preparation – Update – Erase – Qfield data collection - Adding Geo-Tag Photo - Interpolation -thematic map preparation; Map layout Design

Module 4: Fundamental Concepts of Remote Sensing

History of Remote Sensing – Electromagnetic Energy – Characteristics of Electromagnetic spectral regions – Energy interaction with earth surface features – spectral response of natural earth surface features – Sensor system used in remote sensing – resolution of remote sensing data - Earth Observation Satellites – weather and marine conservation satellites

Module 5: Digital Image Processing and Application

Sources of Spatial Data – Image Rectification – Image Enhancement – Band Combination – Image Classification – Index calculation – Thermal image processing – DEM data analysis – Applications of remote sensing data in disaster management

Essential Readings

1. Pradip Kumar Guha (2013), Remote Sensing for the beginner, Third Edition, East-West Press, New Delhi.
2. Kang-Tsung Chang (2018), Introduction to Geographical Information Systems, McGraw Hill Education.
3. Michael N. Demers (2009), Fundamentals of Information Systems, Fourth Edition, John Wiley & Sons, Inc
4. Jonathan E. Campbell, Michael Shin (2012), Geographic Information System Basics, <http://lardbucket.org>
5. Fundamentals of Remote Sensing, A Canada Centre for Remote Sensing Tutorial, Natural Resources, Canada
(https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/earthsciences/pdf/resource/tutorial/fundam/pdf/fundamentals_e.pdf)
6. <https://www.qgis.org/en/site/>
7. <https://gisenglish.geojamal.com/2019/04/qgis-34-training-manual-read-and.html>
8. P.S Roy, R.S Dwivedi and Vijayan D(), Remote Sensing Applications, National Remote Sensing Centre
(https://www.nrsc.gov.in/sites/default/files/pdf/ebooks/Chap_7_Geosciences.pdf)

Discipline Core : Environmental Sociology

Semester: 1

Credits: 4

Course Outcomes (COs):

1. Understand the reciprocal relationships between environment and society.
2. Gain knowledge about the different ideologies and perspectives of environmental sociology.
3. Understand the relationship between gender and environment.
4. Gain awareness about personal responsibilities and roles in environmental problems.
5. Analyse the interplay between environment, development, capitalism and social justice.
6. Understand Environmental Sociology from one's own experience

MODULE 1: Introduction to Environmental Sociology

- 1.1. Nature and Society- Human being and Nature, Environment in Culture and Religion
- 1.2. Ecological Concern and Economic Thought - Patterns of Industrialisation, Inequitable Growth, Capitalism and Implications on Environment - Eco-crisis, Human Progress versus Ecological Collapse, Environmental problems from the Local to the Global
- 1.3. Social Theory in the Environmental Debate - Non Western Views of the Environment - The Judeo-Christian Legacy – Pre-nineteenth century social readings
- 1.4. The Enlightenment, Environment and Social Theory - 19th-21st century social theory - Development of Environmental Sociology

Essential Reading

Michel Mayerfield Bell, 1998. *An Invitation to Environmental Sociology*, California: Pine Forge Press
Bas Wielenga, 1999. *Towards an Eco-just Society*, Bangalore: Centre for Social Action.

Madhav Gadgil, 1997. *This Fissured Land: An Ecological History of India*, New Delhi: Oxford
Ramachandra Guha, 2000 *Environmentalism: A Global History*, New Delhi: OUP

John Barry, 1999. *Environment and Social Theory*, London: Routledge

M. George and R. Yvonne. 2005. *The Language of Environment*. New York: Routledge

Ramprasad Sengupta. 2014. Ecological Limits and Economic Development, New Delhi: Oxford University Press.

MODULE 2: Major Environmental Ideologies

2.1. Environmental Visions - Thoreau, Rachel Carson, Gandhiji

2.2. Anthropocentrism, Anthropocene and Deep Ecology

2.3. Social Ecology and Environmental Sociology: Debates

2.4. Green dilemmas: Consumerism and Environmentalism

Essential Reading

Bas Wielenga, 1999. Towards an Eco-just Society, Bangalore: Centre for Social Action.

Michel Mayerfeld Bell, 1998. An Invitation to Environmental Sociology, California: Pine Forge Press. (Ch.2)

Marx, Karl. 1976. The Fetishism of the Commodity and its Secret. In Capital: A Critique of Political Economy, Vol. 1. Trans. Ben Fowkes. Harmondsworth: Penguin & New Left Review, pp. 163-177.

Gardner, Assadourian, Sarin. 2013. "The State of Consumption Today". In State of the World 2004: Progress towards a Sustainable Society. UK: Earth Scan

Christopher Schlottmann et. al., 2017. Environment and Society: A Reader. New York: New York University Press. (CH.9)

Henry Thoreau, 1854; 2006. Walden, or Life in the Woods, The Pennsylvania State University: Penn State Electronic Classic Series

Rachel Carson, 1962. Silent Spring, Goa: Other India Press

MODULE 3: Gender and Environment

3.1. Evolution of Masculinist Forestry – forest policies and management

3.2. Ecology and culture – Gendered hierarchies

3.3. Gender and Environment Debate – Ecofeminism

3.4. Impact of environmental degradation – a gender perspective

Essential Reading:

- Michel Mayerfeld Bell, 1998. An Invitation to Environmental Sociology, California: Pine Forge Press
- Maria Mies and Vandana Shiva, 2010. Ecofeminism, Jaipur: Rawat
- Karren J Warren, 1997. Ecological Feminism, London: Routledge
- Werner Wolfgang, 1993. Aspects of Ecological Problems and Environmental Awareness in South Asia, New Delhi: OUP. Agarwal.
- Bina. 2011. Gender and Green Revolution, New Delhi: Oxford University Press.
- Vandana Shiva. 1991. Ecology and the Politics of Survival: Conflict over Natural Resources in India, New Delhi: SAGE.
- Vandana Shiva. 2014. Jeevante nilanilppu, Kozhikode: Mathrubhumi Books (2009. Staying Alive: Women Ecology and Development. Delhi: Kali for Women)

MODULE 4: Politics of Environment

- 4.1. Struggles over Resources - Globalization and Third World countries - Environmental policies - Hazardous Industries, Mining and Agriculture – Impact on Indigenous Communities
- 4.2. Human Wildlife Conflict - Anthropogenic Stress on Ecosystem
- 4.3. Environmental Movements - Development Induced Conflicts, Environmental Injustice – case studies
- 4.4. Sustainable Development and its Critique

Essential Reading

- Christopher Schlottmann et. al., 2017. Environment and Society: A Reader. New York: New York University Press. (Ch.32)
- Madhav Gadgil, 1997. This Fissured Land: An Ecological History of India, New Delhi: Oxford
- Saberwal. S and Rangarajan. M. 2005. Battles Over Nature: Science and the Politics of Conservation. New Delhi: Permanent Black. (Ch.7)
- Ghanshyam Shah, 2004. Social Movements in India, New Delhi: Sage.

- Gadgil, M. and R. Guha . 1995. Ecology and Equity: Use and Abuse of Nature, UK: Penguin Books
- Vandana Shiva. 1991. Ecology and the Politics of Survival: Conflict over Natural Resources in India. New Delhi: SAGE.
- Ranjit Dwivedi. 2006. Conflict and Collective Action: The Sardar Sarovar Project in India. New York: Routledge.
- Omvedt, G. 1984: Ecology and Social Movements, Economic and Political Weekly. XIX (44): 1865- 67.
- Lele, S. 1991. Sustainable Development: A Critique, World Development. 19 (6): 607-21
- Prasad M.K. 2001. Prakrithi Samrakshanam (Malayalam), Kerala Sasthra Sahithya Parishad, Kochi

DMM CORE COURSE: Field Practicum -I

Semester: 1

Credits: 4

Course Outcomes (COs):

CO1 Situate the disasters, risk and vulnerabilities within the geographical and socio-political structure of the society and its ecology

CO 2 Identify problems in the society, analyze the causes, capacity and resources available to deal with those problems

CO 3 Become familiar with the working of social welfare and disaster governance agencies in the society.

CO 4 Use technology to map the geophysical locations to identify disaster risk propensity as part of making disaster plans.

CO 5 Organize and lead community camps

CO 6 Implement community intervention program/ project based on community learning.

CO 7 Develop skill in documentation and writing reports

CO 8 Make visual and oral presentations based on social analysis and projects undertaken

Components of Ist Semester Fieldwork:

- Observation visits & interactions with experts
- Community Camp
- Community field work

Field work preparation : workshop will be conducted to discuss self reflexive field work practices. Students will be prepared to critically understand the socio-political constitution of 'field;' The power structure inherent in interactive spaces- between students and the community and between the community members will be discussed. Ethical dilemmas involved in practice situations, listening skills, and participatory approaches of problem identification and analysis will be part of field work training.

Community Profile: Using the skills developed from Research Methodology and the theoretical perspectives, the students are to prepare a community profile of the community where they conduct the camp. Community Profile will include history of the community, the social life, culture and practices of the community; environmental and geographical location;

livelihood and economic conditions; education; health; infrastructural facilities; governance and politics; problems and capacities of the community.

Action projects: Students will be split into teams and each team should take up a social issue and execute a small project to tackle any aspect of this social issue.

Fieldwork Report & Presentation: As part of the fieldwork conducted the student should mandatorily submit a report and do a presentation about the work undertaken.

References

Fook, J., and Gardner, F. (2007). *Practising Critical Reflection: A resource handbook*. Maidenhead: Open University Press

Yip, K. S. (2006). Self-reflection in reflective practice: A note of caution. *British Journal of Social Work*, 36, 777-788

Kothari, C.R. (2004). *Research methodology: methods and techniques*. New Age International (P) Limited Publishers.

Newman, W.L. (2014). *Social research methods: qualitative and quantitative approaches*. Pearson Education Ltd.

Singh, A.K. (2016). *Tests, measurements and research methods in behavioral sciences*. Bharati Bhavan

Walliman, N. (2011). *Research Methods: the basics*. Routledge.

Newman, W.L. (2014). *Social research methods: qualitative and quantitative approaches*. Pearson Education Ltd.

Kothari, C.R. (2004). *Research methodology: methods and techniques*. New Age International (P) Limited Publishers.

Newman, W.L. (2014). *Social research methods: qualitative and quantitative approaches*. Pearson Education Ltd.

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Walliman, N. (2011). *Research Methods: the basics*. Routledge.

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Atkinson Paul and Amanda Coffey, Sarah Delmont et.al. (2001). *Handbook of Ethnography*. London: Sage.

Dynes, Sarah and Terry Williams. (2018). *On Ethnography*. US: Wiley.

Oommen, T. K. (2007). *Knowledge and Society: Situating Sociology and Social Anthropology, Revised Edition*. New Delhi: OUP.



SREE SANKARACHARYA UNIVERSITY OF SANSKRIT, KALADY

Project Mode PG Programme

Multidisciplinary Dual Main Master's in Disaster Management and Mitigation

**(Associating Disciplines: Geography, Psychology,
Sociology and Social Work)**

Sanctioned by
**Ministry of Higher Education, Government of
Kerala**

Programme Regulations

Programme Structure and Syllabi

Programme Highlights

A Multidisciplinary Innovative PG Programme

Self Sustaining Mode

Fast emerging academic field with Cross Disciplinary Knowledge

Minimum Credit requirement Is 92

Intake - 40 Seats

Dual Main Programme ensuring equivalency with other Universities

Awarding Four Separate Degrees in a Single Programme

- o MSc In Geography and DMM
- o MSc In Psychology and DMM
- o MA In Sociology and DMM
- o Master of Social Work and DMM

Fieldwork in all semesters for ground experience

Internships

PG Programme in Social Work and Disaster Management and Mitigation (DMM)

MSW and DMM

Programme Specific Outcomes (PSOs)

PSO 1. Understand the natural and social aspects concerning disasters and disaster management mechanisms. (PO3)

PSO 2. Analyse critically social and ecological vulnerabilities, hazards and resilience. (PO1)

PSO 3. Critically and creatively engage with social work theory to develop reflexive and informed social work interventions while engaging with social situations. (PO1)

PSO 4. Critically analyse and apply existing global and national level frameworks and policies in disaster risk reduction and mitigation. (PO1)

PSO 5. Demonstrate competence in using technology for disaster management and mitigation. (PO2)

PSO6. Develop competencies and leadership qualities to manage Development Projects and Organizations (PO4)

PSO 7. Engage and develop participatory community-based risk reduction plan thereby empowering the communities. (PO4)

PSO 8. Develop communication skills required for the effective social work practice with inter and intra personal client system and with society at large (PO 4)

Programme Structure

(Total Minimum Credits: 92)

Semester I

Sl. No.	Course	Discipline	Core/ Elective	Credits	No. of Students	Hours/ Week
1.	Understanding Disasters	DMM	Core	4	40	4
2.	INTRODUCTION TO SOCIAL WORK PROFESSION	Soci	Core	4	10+30=40	4
3.	Disaster and Society	DMM	Core	4	40	4
4.	Geo- Spatial Technologies for DMM	Geography	Cross Disciplinary Core	4	30	4

5.	SOCIAL THEORIES AND SOCIAL WORK PERSPECTIVES	Social Work	Core	4	10+30=40	4
6.	Fieldwork (Community)	DMM	Core	4	40	120hrs
	Total Credits			24		

Semester II

Sl. No.	Course	Discipline	Core/ Elective	Credits	No. of Students	Hours /Week
1.	Disaster Governance	DMM	Core	4	40	4
2.	Social Work with Individuals and Groups (Social Work Methods I & II)	Social Work	Core	4	10+30=40	4
3.	Community Based Risk Reduction	Social Work	Cross Disciplinary Core	4	40	4
4.	Multi-disciplinary Elective	Sanskrit	Elective	4	40	4
5.	Fieldwork (PRA Camp)	DMM	Core	4	40	10 days (12hrs x 10 = 120hrs)
6.	Sociology of Change, Development and Sustainability	Sociology	Cross Disciplinary Core	4	40	4
	Total Credits			24		

Semester III

Sl. No.	Course	Discipline	Core/ Elective	Credits	No. of Students	Hours /Week
1.	Methodologies in Disaster Management Research	DMM	Core	4	40	4
2.	Disaster and Development Communication	Social Work	Core	4	10+30=40	4

3.	Stress and Coping	Psychology	Cross Disciplinary Core	4	40	4
4.	Multi-disciplinary Elective	Any Department	Elective	4	40	4
5.	Fieldwork	Social Work	Core	4	10+30=40	120hrs
6.	Psychological First Aid	DMM	Skill Course	1	40	15hrs/ Semester

7.	Life Saving Skills	DMM	Skill Course	1	40	15 hrs/ Sem
	Total Credits			22		

Semester IV

Sl. No.	Course	Discipline	Core/ Elective	Credits	No. of Students	Hours/ Week
1.	Project Planning and Administration for Disaster Risk Reduction	DMM	Core	4	40	4
2.	1. Disaster Finance and Humanitarian aid 2. Disaster Communication 3. Disaster and Geopolitics 4. Public Health and Mental Health	DMM	Elective	4	40	4
3.	Health Social Work	Social Work	Core	4	10+30=40	4
4.	Dissertation	DMM	Core	6	40	6
5.	Internship	DMM	Core	4	40	30 days

	Total Credits			22		
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- An additional field work (4 Credits) may be offered to the MSW and DMM students.

Programme Syllabi

DMM CORE: UNDERSTANDING DISASTERS & DISASTER MANAGEMENT (4 Credits)

Course Outcome

- Understand the basic concepts of disaster and characteristics of disasters
- Recognize the importance of environment for understanding disasters and disaster management
- Evaluate various physical elements and forces acting on the surface of the earth.
- Examine various process and drivers behind the occurrence of disasters
- Analyse the impacts of disasters in various sectors in different context
- Develop skills in identification and preparation for vulnerability and risk mapping

Module 1: Basic Concepts of Disaster and Disaster Management

1. Understanding and defining disaster: Acts of God, Acts of Nature, Disasters as joint effects of nature and society, Injustice and human vulnerability to disasters.
2. Disasters in the context of Physical and Environmental Vulnerability
3. Classification of Disasters; Disaster cycle
4. Need for disaster management in today's world.
 - 4.1. Disaster management in India
 - 4.2. Disaster management in Kerala
5. Basic steps in Disaster Management and Mitigation

Essential Reading

Quarantelli, E L (1998) What is a Disaster? Perspectives on the Question. United Kingdom, Routledge.

Perry, Ronald W., and Quarantelli, Enrico Louis (2005) What is a Disaster? New Answers to Old Questions. United Kingdom, Xlibris.

Hewitt K. (2017) Regions of Risk: A Geographical Introduction to Disasters. Taylor and Francis. ISBN:9781317894162, 1317894162

Jones, L. (2019). The big ones: How natural disasters have shaped us (and what we can do

about them). Anchor.

Bankoff B (2023). Time is of the essence: Disasters, Vulnerability and History. *International Journal of Mass Emergencies & Disasters*. Volume 22, Issue 3. <https://doi.org/10.1177/028072700402200303>

Vasilescu L, A Khan and H Khan (2008) *DISASTER MANAGEMENT CYCLE - A THEORETICAL APPROACH*. Editura Universitaria Craiova. (Free down load:<https://www.cceol.com/search/article-detail?id=147294>)

Collins, A.E. (2009). *Disaster and Development* (1st ed.). Routledge. <https://doi.org/10.4324/9780203879238>

Taori, K. (2005). *Disaster Management Through Panchayati Raj*. India: Concept Publishing Company.

Joice K. Joseph, Dev Anand, P. Prajeesh, Anand Zacharias, Anu George Varghese, A.P. Pradeepkumar,

K.R. Baiju, (2020) Community resilience mechanism in an unexpected extreme weather event: An

analysis of the Kerala floods of 2018, India, *International Journal of Disaster Risk Reduction*, Volume 49, Science Direct. ISSN 2212-4209, <https://doi.org/10.1016/j.ijdr.2020.101741>.

Module 2: Natural Hazards and physical environment

1. Defining natural phenomena and natural hazards - physical forces acting on the surface of the earth (endogenic and exogenic forces)
2. Ecosystem and its components - Ecosystem services - Biodiversity
3. Hazards in different geographical settings: in mountains and coastal environment
4. Contextualizing climate change, extreme events and natural hazards

Essential Reading

Scheidegger, A. E. (2012). *Theoretical Geomorphology*. Germany: Springer Berlin

Heidelberg. Meli, P., Vieli, L., Spirito, F., Reyes-Riveros, R., Gonzalez-Suhr, C., &

Altamirano, A. (2023). The importance of considering human well-being to understand social preferences of ecosystem services. *Journal for Nature Conservation*, 126344.

Takacs, V., & O'Brien, C. D. (2023). Trends and gaps in biodiversity and ecosystem services research: A text mining approach. *Ambio*, 52(1), 81-94.

Melaku, A., Ivars, J. P., & Sahle, M. (2023). The state-of-the-art and future research directions on sacred forests and ecosystem services. *Environmental Management*, 1-14.

Sandhu, H., Zhang, W., Meinzen-Dick, R., ElDidi, H., Perveen, S., Sharma, J., & Priyadarshini, P.

(2023). Valuing ecosystem services provided by land commons in India: implications for research and policy. *Environmental Research Letters*.

Zimmermann, M., & Keiler, M. (2015). International frameworks for disaster risk reduction: Useful

guidance for sustainable mountain development? *Mountain Research and Development*,

35(2), 195-202.

Coratza, P., & De Waele, J. (2012). Geomorphosites and natural hazards: teaching the importance of geomorphology in society. *Geoheritage*, 4, 195-203.

Hewitt, K. (2004). Geomorphic hazards in mountain environments. *Mountain geomorphology*, 187-218.

Klein, N. (2015). This changes everything: Capitalism vs. the climate. Simon and Schuster.
Douglas, K. (2021). The nature fix. *New Scientist*, 249(3327), 36-40.

Pelling M. 2010. Adaptations to Climate Change: From Resilience to Transformation. Taylor & Francis. ISBN: 9781134022014, 1134022018

Srinivas, H., & Nakagawa, Y. (2008). Environmental implications for disaster preparedness: lessons learnt from the Indian Ocean Tsunami. *Journal of environmental management*, 89(1), 4-13.

Module 3: Natural process and disasters

1. Spatial distribution of disasters- Drivers and causes, salient features - History of major disaster events - Global and Local
2. Geological disasters (Earthquake, landslide, tsunami)
3. Climatological disasters (flood, drought, cyclones; lightning)
4. Hydrological disasters (Flood, GLOF, avalanche)
5. Major natural disasters: Case studies

Essential Reading

Hewitt K. 2017. Regions of Risk: A Geographical Introduction to Disasters. Taylor and Francis. ISBN: 9781317894162, 1317894162

Rodriguez H, Joseph E. Trainor, William Donner (2017) Handbook of Disaster Research. Springer. ISBN: 9783319632544, 331963254X

Jones LM. The Big Ones: How Natural Disasters Have Shaped Us (and what We Can Do about Them). Doubleday Publishers. ISBN: 9780385542708, 0385542704

Scott, R., MacDonald, G., Horn, W., Bolt, B. (1977). Geological Hazards: Earthquakes - Tsunamis - Volcanoes - Avalanches - Landslides - Floods. Germany: Springer New York.

Wenzel F and J Zschau (2013). Early Warning for Geological Disasters: Scientific Methods and Current Practice. Germany: Springer Berlin Heidelberg

Okuyama, Y., & Sahin, S. (2009). Impact estimation of disasters: a global aggregate for 1960 to 2007. World Bank Policy research working paper, (4963).

Thomas, V., Albert, J. R. G., & Hepburn, C. (2014). Contributors to the frequency of intense climate disasters in Asia-Pacific countries. *Climatic Change*, 126, 381-398.

Pfister C and C Mauch (Ed) (2009) Natural Disasters, Cultural Responses: Case Studies Toward a Global Environmental History. United Kingdom: Lexington Books.

Module 4: Human induced disasters

1. Human-induced disasters: Causative factors (Environmental degradation enhancing pre-existing environmental vulnerabilities)
2. Technological/human-made disasters (industrial, nuclear, transportation, dam failure, stampede, terrorism, conflicts: war, cyber-attacks)
3. Chemical disasters and biological disasters; (chemical leaks and explosions, epidemic/pandemic, pest attacks/locusts/insect infestations)
4. Human-induced disasters: Case studies

Essential Reading

Wilson, E. O. (2017). *Half-Earth: Our Planet Fight for Life*. United Kingdom: WW Norton.

Cutter, S. L. (1996). Vulnerability to environmental hazards. *Progress in human geography*, 20(4), 529-539. (Free download)

Turner, Alan Keith (2018). Social and environmental impacts of landslides.

Innovative Infrastructure Solutions 3. 1-25.

Sharma, J., & Ravindranath, N. H. (2019). Applying IPCC 2014 framework for hazard-specific vulnerability assessment under climate change. *Environmental Research Communications*, 1(5), 051004.

Dave R K (2018) *Disaster Management in India: Challenges and Strategies*. Prowess

Publishing. Perry, John. *Nuclear Weapons and the Environment: An Ecological Case for Non-proliferation*. Lexington Books, 2021.

Biswas, Asit K. (2004). Dams: cornucopia or disaster? International Journal of Water Resources Development 20.1 3-14.

Salazar, Mary K., and Betty Kelman. (2002). Planning for biological disasters: Occupational Health Nurses as "First Responders". *AAOHN Journal* 50.4. 174-181.

Kumar, Jitendra. (2020). Biological disaster management. International Journal of Technical Research Science 5.7. 5-10.

Kondratyev, Kirill Ya, Alexei A. Grigoryev, and Costas A. Varotsos. (2002). *Environmental disasters: Anthropogenic and natural*. London, England: Springer.

Sriramachari, S. (2004). The Bhopal gas tragedy: An environmental disaster. *Current Science*, 86(7), 905-920.

Beigel, A., & Berren, M. R. (1985). Human-induced disasters. *Psychiatric Annals*, 15(3), 143-150.

Nibanupudi, H. K., Gupta, A. K., & Rawat, P. K. (2015). Mitigating climatic and human induced

disaster risks through ecosystem resilience: Harmonizing built and natural environments in the HKH region. *Mountain hazards and disaster risk reduction*, 139-157.

Ghassemi, F., Jakeman, A. J., & Nix, H. A. (1995). *Salinisation of land and water resources: human causes, extent, management and case studies*. CAB international.

Ajin, R.S., Nandakumar, D., Rajaneesh, A. et al. (2022). The tale of three landslides in the Western Ghats, India: lessons to be learnt. *Geoenviron Disasters* 9, 16 <https://doi.org/10.1186/s40677-022-00218-1>

Module 5: Activities and Processes in Disaster Management and Mitigation

1. Disaster Preparedness - risk assessment, emergency plan creation, emergency response teams
2. Response - saving lives, reducing health impacts, normalising post-disaster situation
3. Recovery - rebuild infrastructure, provide assistance to the affected
4. Mitigation - actions to reduce future disasters

Essential Reading

Pelling M. (2010). *Adaptations to Climate Change: From Resilience to Transformation*.

Taylor Francis. ISBN: 9781134022014, 1134022018

UN (2022). *United Nations Global Assessment Report on Disaster Risk Reduction - Our World at Risk: Transforming Governance for a Resilient Future*. Downloadable at: www.undrr.org/GAR2022

COLLINS, L. R. (2023). *DISASTER MANAGEMENT AND PREPAREDNESS*. Taylor & Francis. CRC Press.

Rubin, O., Dahlberg, R. (2017). *A Dictionary of Disaster Management*. United Kingdom: OUP Oxford.

Kiefer, J. J., Jerolleman, A. (2012). *Natural Hazard Mitigation*. United Kingdom: Taylor & Francis.

Suggested Reading

André van Amstel, Md. Nazrul Islam (Ed) (2021). *India: Climate Change Impacts, Mitigation and Adaptation in Developing Countries*. Springer International Publishing.

DHAMEJA, A., MEDURY, U., SAHNI, P. (2018). *DISASTER MITIGATION: EXPERIENCES AND REFLECTIONS*. India: PHI Learning.

Maskrey, A. (1989). *Disaster Mitigation: A Community Based Approach*. United Kingdom:

Oxfam. Esteban M, T Shibayama and H Takagi (Ed) (2015). *Handbook of Coastal Disaster Mitigation for Engineers and Planners*. Netherlands: Elsevier Science.

Aaltola, M. (2012). Theoretical Departures to Disasters and Emergencies. In: Attinà, F. (eds) *The Politics and Policies of Relief, Aid and Reconstruction*. Palgrave Macmillan, London. https://doi.org/10.1057/9781137026736_4 (Free download)

Quarantelli, E. L. (1989). Conceptualizing disasters from a sociological perspective.

International Journal of Mass Emergencies & Disasters, 7(3), 243-251.

Wiest, R. E., Mocellin, J. S., & Motsisi, D. T. (1994). The needs of women in disasters and emergencies (pp. 12-6). Winnipeg, MB, Canada: Disaster Research Institute, University of Manitoba.

Britton, N. R. (1986). Developing an understanding of disaster. *The Australian and New Zealand Journal of Sociology*, 22(2), 254-271.

Nan, Y., Li, Y., Liu, K., Dai, B., Lai, J., & Zhang, Y. (2023). Global earthquake disaster and emergency response in 2021. In *Advances in Civil Engineering: Structural Seismic Resistance, Monitoring and Detection* (pp. 606-611). CRC Press.

Roy, P., Pal, S. C., Chakraborty, R., Chowdhuri, I., Saha, A., & Shit, M. (2023). Effects of climate change and sea-level rise on coastal habitat: Vulnerability assessment, adaptation strategies and policy recommendations. *Journal of Environmental Management*, 330, 117187.

Kumar, S., David Raj, A., Kalambukattu, J. G., & Chatterjee, U. (2023). Climate Change Impact on Land Degradation and Soil Erosion in Hilly and Mountainous Landscape: Sustainability Issues and

Adaptation Strategies. In *Ecological Footprints of Climate Change: Adaptive Approaches and Sustainability* (pp. 119-155). Cham: Springer International Publishing.

Kamal, M., Zahid, D., & Malak, M. A. (2023). WHY IS WOMEN'S LEADERSHIP IMPORTANT FOR ENHANCING DISASTER RESILIENCE TO NATURAL PERTURBATIONS. *Coastal Disaster Risk Management in Bangladesh: Vulnerability and Resilience*.

Ghosh, A., Sen, A., & Frietsch, M. (2023). "What is a 'very severe cyclone' please"? Uncovering

knowledge and communication gaps in climate resilience realities. *International Journal of Disaster Risk Reduction*, 86, 103499.

Anwana, E. O., & Owojori, O. M. (2023). Analysis of Flooding Vulnerability in Informal Settlements Literature: Mapping and Research Agenda. *Social Sciences*, 12(1), 40.

Mikulecký, P., Punčochářová, A., Babič, F., Bureš, V., Čech, P., Husáková, M., ... & Zanker, M. (2023). Dealing with risks associated with tsunamis using indigenous knowledge approaches.

International Journal of Disaster Risk Reduction, 103534.

Carmona, R., Reed, G., Thorsell, S., MacDonald, J. P., Dorough, D. S., Rai, T. B., & Sanago, G. (2023). A New Partnership with Indigenous Peoples? An Analysis of the Intergovernmental Panel on Climate Change's Sixth Assessment Report. [researchsquare.com](https://www.researchsquare.com) (Free download)

Al-Husain, R. (2023). Epidemiological disaster management: Literature survey and analysis. *International Journal of Innovative Research and Scientific Studies*, 6(1), 49-63.

Botzen, W. W., Deschenes, O., & Sanders, M. (2019). The economic impacts of natural disasters: A review of models and empirical studies. *Review of Environmental Economics and Policy*.

Guha-Sapir, D., Santos, I., & Borde, A. (Eds.). (2013). The economic impacts of natural disasters. Oxford University Press.

Other Resources from WWW:

Ramsar Convention. (2017). Wetlands: A natural safeguard against disasters. <https://www.ramsar.org/document/resolution-xii13-wetlands-and-disaster-risk-reduction> United Nations Office for Disaster Risk Reduction. (n.d.). Disaster risk reduction & disaster risk management.

Sendai Framework: <https://www.undrr.org/implementing-sendai-framework>

World Meteorological Organization. (2021). WMO atlas of mortality and economic losses from weather, climate and water extremes. <https://public.wmo.int/en>

World Bank: <https://www.worldbank.org/en/topic/disasterriskmanagement>

DMM Core : DISASTER & SOCIETY

Semester: 1

Credits: 4

Course Outcomes (COs):

1. Understand Sociology as a scientific discipline and its theoretical approaches
2. Understand the social structure and transformations of Indian and Kerala society
3. Understand the framing of disasters through the lens of Sociology
4. Appraise how social structures influence disaster experience and think critically about how social dynamics shape the ways people and communities prepare for, face and recover from disaster

Module:1 The Study of Human Society

1. Emergence of Sociology as a Scientific Discipline; Nature & Scope
2. Sociological Perspective : Common Sense Vs Sociological Imagination; Units of Study, Methodological Orientations: Positivism, Humanism, Materialism
3. Theoretical Approaches - Classical Tradition, Structuralism, Functionalism, Structural-Functionalism, Conflict Perspectives, Critical Theory, Social Constructionism, Post Structural, Postmodern and Neo-Social Perspectives

Essential Reading

Bottomore, T. B. (2010). Sociology: A Guide to Problems and Literature. United Kingdom: Routledge.

Davis, K. (1963). Human Society. United Kingdom:

Macmillan. Giddens, A., Sutton, P. W. (2017). Sociology.

Germany: Wiley.

Inkeles, A. (1964). What is Sociology? An Introduction to the Discipline and Profession.

United States: Prentice-Hall.

Oommen, T.K. & Venugopal C.N. (2018). Sociology. Delhi : Eastern Book Company.

Mills, C. W. (2022). The Sociological Imagination. India: Aakar.

Timasheff, N. S. (1963). Sociological Theory: Its Nature and Growth. United States: Random House.

Module: 2 Social Structure, Process and Transformations

1. Basic Concepts : Society, Community, Association, Socialisation, Institution, Culture, Social groups, Social Stratification and Mobility, Social System, Social Structure, Social Problems and Social Change
2. Indian Context : Family and Kinship; Caste and Class; Economy and Society; Polity and Society; Education and Society; Urban, Peasant and Tribal Communities; Unity in Diversity
3. Kerala Context : Genealogy of Structural Changes in Kerala Society; Caste, Class and Religion; Family, Marriage and Gender; The Unique Kerala

Essential Reading

A.M. Shah. (1996). Social Structure and Change (vol. 4 & 5). New Delhi: Sage

Beteille.A. (2011).Caste, Class and Power.New Delhi: Oxford

M.N. Srinivas. 1997. Caste: its twentieth century avatar. New Delhi: Penguin

Oommen, T.K. & Venugopal C.N. (2018). Sociology. Delhi : Eastern Book Company.

Elamkulam P.N. Kunjan Pillai. 1970. Studies in Kerala History. Kottayam: National Book Stall.

Rathi Ramachandran. et.al. 2005.History of Medieval Kerala. New Delhi: Pragati Publications.

Raja Jayaraman. 1981. Caste and Class: dynamics of inequalities in Indian society. Delhi: Hindustan Publishing

Module:3 Sociology of Disaster

1. Disaster and Society - Disasters as a Social Phenomenon and Significance of Sociological Approach; The Hazards-Disaster Tradition; Human Ecology, Vulnerability, and Resilience; The Crisis Approach; Culture, Knowledge and Religious Interpretations of Disaster
2. Framing Disasters: Constructionist Theories - Weberian Political Sociology; Ulrich Beck - Risk Society; Anthony Giddens - The Consequences of Modernity;
3. The Social Science Disaster Paradigm; Environment, Development and Sustainability; Studying Future Disasters and Crises
4. Resilience and Disasters : Case Studies

Essential Reading

Donner, W. R. (2007). The Political Ecology of Disaster: An Analysis of Factors Influencing U.S. Tornado Fatalities and Injuries, 1998-2000. *Demography*, 44(3), 669-685. <http://www.jstor.org/stable/30053107>

Handbook of Disaster Research. (2017). Germany: Springer International Publishing. (Ch. 1,2, & 4)

Schutt, R.S. (2010). A Sociological Perspective on Disasters. In Rebuilding Sustainable Communities for Children and Their Families After Disasters: A Global Survey. (2010). United Kingdom: Cambridge Scholars.

Stallings, R. A. (2002). Weberian Political Sociology and Sociological Disaster Studies.

Sociological Forum, 17(2), 281-305. <http://www.jstor.org/stable/3070327>

Module: 4 Disaster and Vulnerability Profile

1. Vulnerability Profile : Models of Vulnerabilities, Global to Local; Power, Human Rights and Disaster; The Political Ecology of Disaster Vulnerability
2. The Cultural Turn in Disaster: Culture and Social Construction, Culture as a Source of Resilience, Culture as a Source of Vulnerability
3. Race, Class, Religious affiliation, Caste, Ethnicity, Gender, Sexuality, Children, Youth and Elderly, Disability and Disaster Vulnerability
4. Social Capital in Disaster Research; Intersectionality Approach

Essential Reading

Baruah, M. (2023) Slow disaster: Political ecology of hazards and everyday life in the Brahmaputra Valley, Assam. London: Routledge, Taylor & Francis Group.

Cutter S, Boruff B, Shirley W (2003) Social vulnerability to environmental hazards. *Soc Sci Q* 84:242-261. <https://doi.org/10.1111/1540-6237.8402002>

Handbook of Disaster Research. (2017). Germany: Springer International Publishing. (Ch.6, 10-14)

The Routledge Handbook of Disaster Risk Reduction Including Climate Change Adaptation. (2020). United Kingdom: Taylor & Francis Group. (Ch.6, 13)

Handbook of Hazards and Disaster Risk Reduction. (2012). United Kingdom: Taylor & Francis. (Ch.3-4,6,8-10, 34-38)

Disaster Risk Reduction : Community Resilience and Responses. (2018). Germany : Palgrave Macmillan US

Suggested Reading

Alexander, D. A. (2005). An interpretation of disaster in terms of changes in culture, society and international relations. In R. W. Perry & E. L. Quarantelli (Eds.), What is a disaster: New answers to old questions (pp. 25-38). Philadelphia: Xlibris Publishers.

Amundsen, H. (2012). Illusions of resilience? *Ecology and Society*, 17(4),

1-19 Barton, A. H. (1969). Communities in disaster. New York, NY, USA: Doubleday.

- Barton, A. H. (1989). Taxonomies of disaster and macrosocial theory. In G. A. Kreps (Ed.), *Social structure and disaster* (pp. 346-350). Newark, DE, USA: University of Delaware Press
- Barton, A. H. (2005). Disaster and collective stress. In R. W. Perry & E. L. Quarantelli (Eds.), *What is a disaster: New answers to old questions* (pp. 125-152). Philadelphia: Xlibris Publishers.
- Bates, F. L., & Peacock, W. G. (1993). *Living conditions, disasters and development*. Athens, GA, USA: University of Georgia Press
- Bates, F. L., & Pelanda, C. (1994). An ecological approach to disasters. In R. Dynes & K. Tierney (Eds.), *Disasters, collective behavior and social organization* (pp. 145-159). Newark, DE, USA: University of Delaware Press
- Berkes, F., & Ross, H. (2013). Community resilience. *Society and Natural Resources*, 26(1), 5-20.
- Birkmann, J., Cardona, O., Carreno, M., Barbat, A., Pelling, M., Schneiderbauer, S., et al. (2014). Theoretical and conceptual framework for the assessment of vulnerability to natural hazards and climate change in Europe. In J. Birkmann, S. Kienberger, & D. Alexander (Eds.), *Assessment of vulnerability to natural hazards* (pp. 1-20). London: Elsevier.
- Boin, A. (2005). From crisis to disaster: Towards an integrative perspective. In R. W. Perry & E. L. Quarantelli (Eds.), *What is a disaster: New answers to old questions* (pp. 153-172). Philadelphia: Xlibris Publishers.
- Boin, A., Comfort, L., & Demchak, C. (2010). The rise of resilience. In L. Comfort, A. Boin, & C. Demchak (Eds.), *Designing resilience* (pp. 1-13). Pittsburgh: University of Pittsburgh Press.
- Bradshaw, S. (2014). Engendering development and disasters. *Disasters*, 30, 34-55.
- Britton, N. R. (2005). What's a word—Opening up the debate. In R. W. Perry & E. L. Quarantelli (Eds.), *What is a disaster: New answers to old questions* (pp. 60-78). Philadelphia: Xlibris Publishers.
- Buckle, P. (2005). Mandated definitions, local knowledge and complexity. In R. W. Perry & E. L. Quarantelli (Eds.), *What is a disaster: New answers to old questions* (pp. 173-200). Philadelphia: Xlibris Publishers.
- Carr, L. T. (1932). Disaster and the sequence-pattern concept of social change. *American Journal of Sociology*, 38, 207-218.
- Chakraborty, J., Collins, T., Montgomery, M., & Grineski, S. (2014). Social and spatial inequities in exposure to flood risk in Miami. *Florida, Natural Hazards Review*, 15(3), 152-157.
- Cisin, I. H., & Clark, W. B. (1962). The methodological challenge of disaster research. In G. Baker & D. Chapman (Eds.), *Man and society in disaster* (pp. 23- 54). New York, NY, USA: Basic Books.

Clausen, L. (1992). Social differentiation and the long-term origin of disasters. *Natural Hazards*, 6, 181-190.

DISCIPLINE CORE - INTRODUCTION TO SOCIAL WORK PROFESSION

(4 Credits)

Course Outcomes:

CO1 Historically place the evolution of social work profession in the global and national contexts

CO2 Understand the concept and characteristics of social work as a profession

CO3 Apprise the fields and methods of social work with the emerging trends

CO4 Analyze the contributions of allied disciplines and traditions to the profession

CO5 Critically scrutinize the philosophical base of the profession

CO6 Apply the social work values in the context of constitutional ethics

CO7 Create a rational and scientific basis for the professional practices and interventions

Module 1

Professional Social Work: - definitions, conceptual evolution, goals, principles and functions. Attributes of profession and social work as a profession; A Social Worker; qualities, skills, use of self, Ethical standards and dilemma (Code of Ethics) of Professional bodies: - regulatory mechanisms, Professional Associations at local, national and international levels. 10 Hours

Module 2

Historical development of Social work: - Charity to Professional Social work, Industrialism, settlement house movement, Elizebathan poor laws, Maternalism to expertise, Beginning of organized charity and Welfare in Euro-American, Asian and African contexts; History of Social Work profession in India, social reforms and reformers, legislations and commissions, constitutional frameworks, constitutional ethics, concepts and practices of major religions to social work - Hinduism, Christianity, Islam, Jainism and Buddhism. Social reformers in Kerala context - Vivekananda, Sree Narayana Guru, Christian Missionaries, Chattambi Swamikal, Poykayil Appachan and Prathyaksha Raksha Daiva Sabha, Ayyankali, Vakkom Maulavi. Gendered history of social work, Historical evolution of Social work education: in Europe, USA, and in India, Major milestones and paradigm shifts, critical issues in social work education.

(15Hours)

Module 3

Philosophical Rationale of Social Work: - Source and development of Values and Assumptions of Social Work. Philosophical traditions and systems relevant to social work ideology, Indian Philosophical systems and social work, Critical understandings on uniqueness of the individual, inherent worth and potentiality, right for dignity and determination, potentiality for self-direction from within, socialization of individuality, group and community, process and effectiveness of participatory and sustainable development from within, Autonomy within the democratic social frames, and public good, Environmental philosophies, Altruism and human rights, socio political logic of development. (15Hours)

Module 4

Social Work Methods - Definitions and basic understanding on, Primary Methods (Social Case Work, Social Group Work and Community Organization,) Secondary Methods (Social Action, Social Work Research and Social Welfare Administration.). Welfare model, right based social work, Strength based social work, Evidence based social work, Anti oppressive social work, grounded practices

(10 Hours)

Module5

Social Work practices in various settings:- - Primary and secondary settings. Traditional Settings: Family and child Settings, Medical and Psychiatric Settings, Industrial Settings, Educational Setting, Correctional setting, Community Development Setting. Emerging settings - Disaster management, HIV/AIDS management, Water and Environment, Gender and development, Geriatric Management, Peoples' movement, Good Governance, Corporate social responsibility, Social entrepreneurship

(10 Hours)

References

- 1.Choudhary, Paul (1964) Introduction to Social Work, Delhi: Atma Ram and Sons.
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7. Barry, Norman (2002): Welfare, New Delhi, Viva Books
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- Nexis Mel Gay & Stephen A. Webb, (2009), Social work theories and methods, London: Sage Publications
- Panikar, K. N. (1995) Culture, Ideology, Hegemony, Intellectual and Social Consciousness in Colonial India, New Delhi: Tulika Publication.
- Patel, Chhaya (1999) Religion - Philosophical Foundation, New Delhi: Rawat Publications
- Professor Stewart Asquith, (2005), The Role of the Social Worker in the 21st Century - A Literature Review, Edinburgh, University of Edinburgh
- Radhakrishnan, S.: (2009) Indian Philosophy, 2 Vol, Oxford, Oxford University Press
- Sreedhara Menon, (1979), Social and cultural history of Kerala, New Delhi, Sterling publications Pvt Ltd.

DISCIPLINE CORE - SOCIAL THEORIES AND SOCIAL WORK PERSPECTIVES(4 Credits)

Course Outcomes:

- CO 1** Outline the historical development of Social work theory
- CO 2** Understand how social science concepts and social theories can be utilized for social analysis and social work intervention
- CO 3** Critically evaluate pros and cons of approaches to social change and social problems.
- CO 4** Acquire skill in understanding and re-articulating arguments present in academic works on social work theory.
- CO 5** Create and present written texts using social science theoretical terms and logically framed arguments.

Module 1

Emergence of social science theories-Enlightenment, Modernity, Colonial Modernity, Post colonialism, postmodernism, - experience and ideas- theorizing experience and its problems in the context of world and India. (6 Hours)

Module 2

Social Science Concepts for understanding social world and Global Discourses

Power and Empowerment- Max Weber, Marx, Michael Foucault.

Caste, citizenship and identity-Gandhi and Ambedkar, Partha

Chatterjee, Identity and its critiques - Craig Calhoun, Aditya

Nigam, Gail Omvedt Inter-sectionality - Kimberle Crenshaw

Public Sphere & Civil Society - Habermas and Nancy Frazer, Neera

Chandoke Social Space - Emile Durkheim, Bourdieu, Le Febvre

Risk society - Ulrich Beck

Queer Theory and Gender - Judith Butler and Judith Halberstam, Nivedita Menon, V Geetha

(16 Hours)

Module 3

Social Problems and Social Perspectives : How the different theoretical perspectives facilitate newer understanding of social problems and how the emergence of identities bring to light other understanding of social problems Violence, Landlessness, Environmental problems, trafficking, Minority issues, Democracy and Politicization, Corruption, Poverty, issues of Children, Women and Gender issues, Aged, Environment, HIV/AIDS, Suicides, Population, Migration, Health and Mental Health, Brain drain, Under employment, and Unemployment (6 Hours)

Module 4

Social Work Perspectives- Key concepts and theoretical discourses, Significance of Social Work experience as an important site of social analysis - Situating the emergence of different forms of social work theoretical perspectives: Humanism and Humanist Social Work, Feminism and Feminist Social Work, Marxism and Marxist Social Work, Existentialism and Existential Social Work, Critical Social Work, Structural Social Work, Multicultural Social Work, Anti-Oppressive Social Work, Environmental/ Ecological Social Work (8 Hours)

Methodology

Classroom lectures- Reading Materials --- discussions or debates---interaction with the field

practitioners---seminar series on sociological theories---case presentations and media analysis---

Assignments.

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Giddens, Anthony. (1996). Capitalism and modern social theory: an analysis of the writings of Marx, Durkheim and Max Weber, Cambridge: Cambridge university press.

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McDonald, Catherine. (2006). Challenging Social Work- The Context of Practice, New York. Palgrave Macmillan

10. McKee, Alan. (2004). The public sphere: An introduction, New York: Cambridge New York Press

11. Woodward, K. (2004). Questioning Identity: Gender, Class, Ethnicity. London: Routledge

1. Aloysius, G. (1997) Nationalism Without A Nation in India, New Delhi., Oxford University Press

Aloysius, G. (2005). Interpreting Kerala's Social Development, New Delhi. Critical Quest

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Angamben, Giorgio. (2011). The kingdom and the glory for theological genealogy of economy and government, Redwood City, Stanford University Press

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Chandoke, Neera. (2003). The Conceits of Civil Society, New Delhi, OUP

Chatterjee, Partha. (1993). The Nation and its Fragments: Colonial and Post-Colonial Histories, New Delhi, OUP

Foucault, Michel. (1983). The subject and power. In H. Dreyfus & P. Rabinow (Eds.), *Beyond Structuralism and Hermeneutics* (pp. 208-226). New York: The University of Chicago Press.

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Habermas, Jurgen (1992). *The structural transformation of the public sphere*, Cambridge, Cambridge polity press

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Weinreich, P and Saunderson, W. (Eds) (2003). *Analysing Identity: Cross-Cultural, Societal and Clinical Contexts*. London: Routledge.

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Cross Disciplinary Core: AN INTRODUCTION TO GEOSPATIAL TECHNOLOGY (4 Credits)

Course Learning Outcomes:

CO1: Understand the principles of geospatial technology

CO2: Create and customise various spatial thematic layers

CO4: Apply geospatial technology tools and techniques at the basic and advanced level

CO5: Explore the different real world application areas of geospatial technology

Course Content

Module 1: Map

Basics

Define Map - importance of Map; Basic mapping principles - scale, Map projections and coordinate systems; Data representation and Map symbolization - colours and patterns; map generalization; Elements of map design and layout Map;

Module 2: Fundamentals of GIS

Introduction to GIS-History of GIS - Component of GIS; Geographic data models-Raster and Vector data, Metadata, Networks, topology, Non-Spatial data; Fundamental concepts in Remote

Sensing-EMR-Remote Sensing Platforms-Data acquisition-resolution of remote sensing data;
Interpretation of Remote Sensing Data

Module 3: GIS Operations and its Importance

Geo-referencing - Database Creation - Data vectorization and editing - Add XY Data - Buffer-Merge - Split - Update - Queries - Field Calculator Operations -Measurements - Summary Statistics - Clip - Grid Preparation - Update - Erase - Qfield data collection - Adding GeoTag Photo
- Interpolation -thematic map preparation; Map layout Design

Module 4: Fundamental Concepts of Remote Sensing

History of Remote Sensing - Electromagnetic Energy - Characteristics of Electromagnetic spectral regions - Energy interaction with earth surface features - spectral response of natural earth surface features - Sensor system used in remote sensing - resolution of remote sensing data - Earth Observation Satellites - weather and marine conservation satellites

Module 5: Digital Image Processing and Application

Sources of Spatial Data - Image Rectification - Image Enhancement - Band Combination - Image Classification - Index calculation - Thermal image processing - DEM data analysis - Applications of remote sensing data in disaster management.

Essential Readings:

1. Pradip Kumar Guha (2013), Remote Sensing for the beginner, Third Edition, East-West Press, New Delhi.
2. Kang-Tsung Chang (2018), Introduction to Geographical Information Systems, McGraw Hill Education.
3. Michael N. Demers (2009), Fundamentals of Information Systems, Fourth Edition, John Wiley & Sons, Inc
4. Jonathan E. Campbell, Michael Shin (2012), Geographic Information System Basics, <http://lardbucket.org>
5. Fundamentals of Remote Sensing, A Canada Centre for Remote Sensing Tutorial, Natural Resources, Canada (https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/earthsciences/pdf/resource/tutorial/fundam/pdf/fundamentals_e.pdf)
6. <https://www.qgis.org/en/site/>
7. <https://gisenglish.geojamal.com/2019/04/qgis-34-training-manual-read-and.html>
8. P.S Roy, R.S Dwivedi and Vijayan D(), Remote Sensing Applications, National Remote Sensing Centre (https://www.nrsc.gov.in/sites/default/files/pdf/ebooks/Chap_7_Geosciences.pdf)

FIELD PRACTICUM - I

4 Credits

Course Outcomes

CO1 Situate the disasters, risk and vulnerabilities within the geographical and socio-political structure of the society and its ecology

CO 2 Identify problems in the society, analyze the causes, capacity and resources available to deal with those problems

CO 3 Become familiar with the working of social welfare and disaster governance agencies in the society.

CO 4 Use technology to map the geophysical locations to identify disaster risk propensity as part of making disaster plans.

CO 5 Organize and lead community camps

CO 6 Implement a community intervention program/ project based on community analysis.

CO 7 Develop skill in documentation and writing reports

CO 8 Make visual and oral presentations based on social analysis and projects undertaken

Components of Ist Semester Fieldwork:

- Observation visits & interactions with experts
- Community Camp
- Community field work

Field work preparation : workshop will be conducted to discuss self reflexive field work practices. Students will be prepared to critically understand the socio-political constitution of 'field;' The power structure inherent in interactive spaces-between students and the community and between the community members will be discussed. Ethical dilemmas involved in practice situations, listening skills, and participatory approaches of problem identification and analysis will be part of field work training.

Community Profile: Using the skills developed from Research Methodology and the theoretical perspectives, the students are to prepare a community profile of the

community where they conduct the camp. Community Profile will include history of the community, the social life, culture and practices of the community; environmental and geographical location; livelihood and economic conditions; education; health; infrastructural facilities; governance and politics; problems and capacities of the community.

Action projects: Students will be split into teams and each team should take up a social issue and execute a small project to tackle any aspect of this social issue.

Fieldwork Report & Presentation: As part of the fieldwork conducted the student should mandatorily submit a report and do a presentation about the work undertaken.

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Yip, K. S. (2006). Self-reflection in reflective practice: A note of caution. *British Journal of Social Work*, 36, 777-788

Carol A. Bailey (2007) *A Guide to Qualitative Field Research*, Sage
Iain Hay and Meghan Cope eds. (2021) *Qualitative Research Methods in Human Geography*, OUP

Nicholas Clifford, Shaun French, Gill Valentine (2003) *Key Methods in Geography*, Sage

Kothari, C.R. (2004). *Research methodology: methods and techniques*. New Age International (P) Limited Publishers.

Newman, W.L. (2014). *Social research methods: qualitative and quantitative approaches*. Pearson Education Ltd.

Singh, A.K. (2016). *Tests, measurements and research methods in behavioral sciences*. Bharati Bhavan

Walliman, N. (2011). *Research Methods: the basics*. Routledge.

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Atkinson Paul and Amanda Coffey, Sarah Delmont et.al. (2001). *Handbook of Ethnography*. London: Sage.

Dynes, Sarah and Terry Williams. (2018). *On Ethnography*. US: Wiley.

Oommen, T. K. (2007). *Knowledge and Society: Situating Sociology and Social Anthropology*, Revised Edition. New Delhi: OUP.